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2. Madrepore. 3. Coralline. 4. Coral.



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(1.)

A DISSERTATION On the USE of SEA-WATER IN THE DISEASES of the GLANDS.

PARTICULARLY

The *Scurvy*, *Jaundice*, *King's-Evil*, *Leprosy*, and the *Glandular Consumption*.

Translated from the *Latin* of

RICHARD RUSSEL, M. D.

The THIRD EDITION, Revised and Corrected.

To which is added,

A COMMENTARY on SEA-WATER,

Translated from the *Latin* of

J. SPEED, M. D.

Both by an EMINENT PHYSICIAN.

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THE PREFACE.

IN the following Treatiſe I offer to the READER's Conſideration, a few Caſes relating to ſuch Maladies as have yielded to the Efficacy of SEA-WATER; and have attempted to explain the Manner of its Operation in vanquiſhing the Diſeaſes of the Glands. However, as ſo powerful a Medicine, in my Opinion, cannot fail of being of far more extenſive Uſe, I promiſe myſelf the moſt accurate Enquiries will be made into its Nature; and that future Experiments will determine how much farther it will be beneficial to Mankind.

However, I think it proper to introduce this Work, by a few Obſervations that I and others have already made upon the Nature, conſtituent Parts and Qualities of SEA-WATER, for from hence, perhaps, a

juſt Judgment may be form'd of what farther may be expected from its Aſſiſtance.

And as I have been aſſiſted in theſe Enquiries by the ingenious and curious Experiments of ſeveral very learned Men, as *Hales*, *Boerhaave*, *Sepius*, *Marſilinus*, *Guidot*, and others, I thankfully acknowledge the Benefit I received from their Obſervations; and I ſhould be ungrateful if I ſhould not mention with due Regard, my very learned Friends, and eminent Phyſicians, *R. Frewin*, *M. Lee*, *E. Wilmot*, and *W. Lewis*, at whoſe Requeſts, and by whoſe Advice and Aſſiſtance, I undertook and compleated this Work; But to come to the Purpoſe.

Water is of itſelf without Taſte or Smell, and being ſprinkled in the Eye, gives no Pain; but is ſmooth and flexible, and cannot offend the Nerves, in any Senſe: Beſides, it is a Kind of common Menſtruum or Diſſolvent of all Salts, and ſeems by Nature deſigned for that Purpoſe; for though the Chryſtals of Sea Salt are of a pyramidical Shape, of Sal Gem cubical, of Nitre priſmatic, and Vitriol and Alum of different Forms, yet Water diſſolves all their Particles, and receives them all in a Kind

Kind of common Menſtruum. Hence it is ſo remarkably ready to diſſolve the ſoapy and gummous Particles of Bodies, and by the Influence of the Sun's Heat, it is made the chief Inſtrument in all chemical Extractions, both Natural and Artificial. But SEA-WATER abounds chiefly with Salt, as may be obſerv'd by thoſe who in making Salt, boil it up to ſuch a Conſiſtence as will bear the Weight of an Egg.

That vaſt Collection of Waters which we call the Sea, ſurrounds the whole Earth, and conſequently waſhes whatever is contained between its oppoſite Shores, as Submarine Plants, Salts, Fiſhes, Minerals, *&c.* and is therefore enrich'd with the Particles it receives from theſe Bodies, either being waſh'd off, or paſſing into the Water by their Tranſpiration; for their fine and ſubtle Particles, continually thrown off by Tranſpiration, and endeavouring to eſcape into the Air, are intercepted by the Water, and mingled with it. But Salts chiefly beſtow their Particles on the Water, and thereby preſerve it from Putrefaction; from this Cauſe alſo, this Fluid acquires a more oily and ſoapy Quality than Spring-Water: And further, this whole Body of

Waters is penetrated by certain ſulphureous Steams or Effluvia.

All theſe Cauſes ſeem jointly to conſtitute this Fluid which we call the Sea, and which the omniſcient Creator of all Things, ſeems to have deſigned to be a Kind of common Defence againſt the Corruption and Putrefaction of Bodies. Therefore, in thoſe Regions where the Heat of the Sun is greateſt, and conſequently more apt to corrupt Fluids, the Sea is ſalteſt, according to the Obſervations of thoſe who ſail under the Equator. But this wondrous Collection of Waters preſerved from Corruption by the Aid of Salts, *&c.* performs the Will of the Omnipotent, by various Means; for the Sun ſeparating the freſh Water from the Salt, and gently attracting it upwards, cauſes alſo many ſulphureous and nitrous Particles to aſcend in the ſame Vapours, which being driven thro' the Air, over all the immenſe Spaces of the Earth and Seas, are probably the Cauſe of all the various Phænomena and Changes of the Air. And when they have perform'd their deſtin'd Taſk in the Air, falling down in the Shape of Dew, Rain, Hail or Snow, they ſupply the Earth with Moiſture,

Moiſture, afford Water to all Kinds of Animals, augment the Springs deſtined to the Uſe of Men with the pureſt Streams; whence the ſuperfluous Liquid runs into the Rivers, and back into the Sea, the common Parent of them all. And thus the Order of Things ſeems to be preſerved.

Theſe Things being premiſed, let us ſee what the moſt accurate Enquirers into Nature, what Phyſicians, and Chemiſts, have obſerved of the SEA-WATER and its principal Qualities, which are Four; the Firſt is, *Saltneſs*; the Second, *Bitterneſs*; the Third, *Nitroſity*, or a nitrous Quality; and the Fourth, *Unctuoſity*.

The Firſt is ſo apparent, that none can be ignorant of it. The ingenious Dr. *Hales* computes, there are five Ounces and an half in a Gallon of SEA-WATER; ſo that a Pint of SEA-WATER contains almoſt five Drams and an half, beſides that bitter oleous Bitumen, and other Parts before-mentioned; and that Doſe is commonly ſufficient in grown Perſons, to give three or four ſmart Stools. The Chemiſts remark, that this Salt conſiſts of a certain peculiar Acid and a mineral Alcali, but the acid Part is ſo intangled and reſtrained

by

by the other Part, that it can ſcarcely exert its Power in a concrete Form. And Salt is of ſuch a fix'd Nature, that it never yields to Putrefaction: Whence it preſerves other Bodies ſo remarkably; for, according to Dr. *Hales*, Spirit of Salt ſo powerfully reſiſts Putrefaction, that three Drops thereof, in an Ounce of Water, will preſerve Fleſh a long Time. And in another Experiment he ſays, that putting raw Beef into SEA-WATER not well diſtill'd, the aſtringent Power of the Water was ſo great, that contracting the minute Blood-Veſſels, no Blood would flow therefrom.

The next Quality is *Bitterneſs*, which it is ſuppoſed to acquire from the bituminous Parts of the ſubjacent Earth; for it is probable, that ſulphureous Exhalations are expell'd thro' innumerable Paſſages by ſubterranean Fires, which impregnate the SEA-WATER, as the Fume of Sulphur penetrates Wine: Wherefore, it is very probable that SEA-WATER is the more bitter the deeper it is taken; and this ſulphureous Bitumen aſcends ſo plentifully in Diſtillation, that *Marſilinus* affirms, that the diſtilled SEA-WATER cannot be drank, for its Quantity of Bitumen which is more nauſeous

ſeous than its Saltneſs; and he alſo ſays, that there is ſo great a Quantity of Bitumen in the *Mediterranean* and *Thracian* Seas, and more eſpecially in the *Pacifick Ocean*; as alſo that which waſhes the *Eaſt-Indian* Shores, that it ſometimes appears floating upon the Surface of the Water; and he judges it proceeds partly from the Veins of Coals, and partly from a Kind of Petroleum, which is found in various Parts of the Earth. The ſame *Author* diſtill'd ſome Pit-Coal and found, that forty Grains of the volatile oleous Spirit of Coals, put into two Pints of Spring-Water, that was made as ſalt as Sea-Water, cauſed it to be as bitter as the Water at the Surface of the Sea; and fifty Grains made it as bitter as the deeper Sea-Water. And perhaps theſe bituminous and ſulphureous Particles, do conſiderably aſſiſt the Salt in diſperſing Tumours; for Phyſicians have always eſteem'd Bitumen to be a diſſolving Medicine, conſiſting of volatile Salt, Sulphur, and a little Earth. "For all bituminous "Bodies have a Power of heating and diſ-"cuſſing, whence hot Baths and medicinal "Springs that contain Sulphur and Bitu-"men, are uſed with Succeſs to diſperſe "cold Humours in the Palſy, Epilepſy,

"and

" and the like Diſtempers." *See Epitom. Phyſicæ Sannert. p.* 52.

Therefore, from theſe Reaſons we may judge, that the Bitterneſs of Sea-Water proceeds from a certain volatile oleous Spirit, with which it is remarkably impregnated, the Quality of which can only be diſcovered by the Effects.

The third Quality is *Nitroſity*. *Hales* found by ſeveral Experiments, that the bitter Salt, of which there is ſuch a large Quantity in Sea-Water, was partly nitrous; and does not think it ſtrange that ſuch a nitrous Salt ſhould be form'd in the bitter Salt, and in the oleous Bitumen of the Sea. He alſo thinks, that this bitter Salt abounds in Plants and Animals; and that the Sea-Water does not only contain a perfect Sea-Salt, but alſo an imperfect bitter Salt, and a Kind of ſulphureous Bitumen. And alſo is of Opinion, that the ſubtle Sulphur which abounds in the Air, Dew, and Rain, *&c.* is extracted from that ſulphureous Bitumen, by the Heat of the Sun; which promotes the Vegetation of the Fruits of the Earth. It has alſo been obſerved, that Sea-Water does not extinguiſh Fire ſo readily as Spring or freſh Water; and this is ſuppoſed to proceed from

from the nitrous Particles abounding in Sea-Water; for Nitre consists of a saline, volatile, oleous Matter; add to this, that the Sea-Water abounds with many bituminous and sulphureous Particles, if it be true, which some affirm, that it will not readily extinguish Fire, and therefore, *Lamps burn better with Salt in the Oil*, Macrob. Saturnal. L. 7. Whence also *Plutarch* in the Beginning of his Book of *Natural Questions*, cites a Proverb used by the Antients, *Do not threw Sea-Water upon the Fire*, on Account of its Oilyness; as he writes in the same Place.

Its last Quality is *Oilyness*; for besides other Things, *Marsilinus* observes, that there is an Oilyness or soapy Quality in distill'd Sea-Water, and he says, that two Pounds of distill'd Sea-Water, will not dissolve so much Salt as the same Quantity of Spring-Water by half a Dram, although their specific Gravities are equal, and attributes this to its Oilyness. The Antients also observed this Oilyness of Sea-Water, "*There is a surprizing Oilyness in Sea-Water*," Pliny *L.* 31. *Cap.* 7. and Father *Bourzes* affirms, that he observed in some Parts of the Ocean, such a remarkable Oilyness, that if a Cloth was dipp'd in it, it acquir'd a Viscidity; and where the Way of the Ship made a brighter

Tract

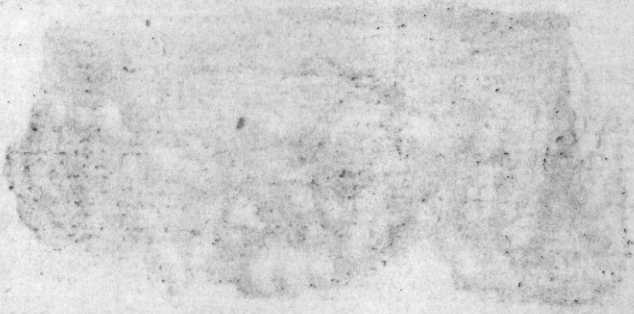
Tract in the Water, there it was more greaſy and viſcid, and the Cloth being ſhook with a quick Motion, gave a great Light. *See the 9th Vol. of the Lettres de R. P. Miſſionaries, Edit. Paris, Octavo.* And indeed, that Viſcidity or Oilyneſs is ſo evident, that Dr. *Hales*, by ſeveral accurate Diſtillations, found that Sea-Water, though deprived of its Salt, did yet retain a certain viſcid Matter, which ſtuck to the Sides of the Veſſel if the Water was diſturbed, but ſunk to the Bottom if it remained without Motion. This Oilyneſs is not found in Spring-Water. This Quality appears alſo in Salt, for if the cleaneſt common Salt is liquified in a moiſt Air, it lets fall its Earth with a certain oily, acrid, and auſtere Liquor.

It is certain, that Salts contribute greatly to all Cures that are performed by Medicinal Waters. They are found in *Bath* Waters, as we learn from the Experiments of *Guidot*; and *Sepius* found a large Quantity of a certain white and bitter Salt in the *Pyrmont* Waters.

All theſe Qualities, and ſome others which plainly appear in Sea-Water, give us great Hopes, that the *Materia Medica* may ſoon receive ſome extraordinary Addition from this Part of Nature.

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Plate I.

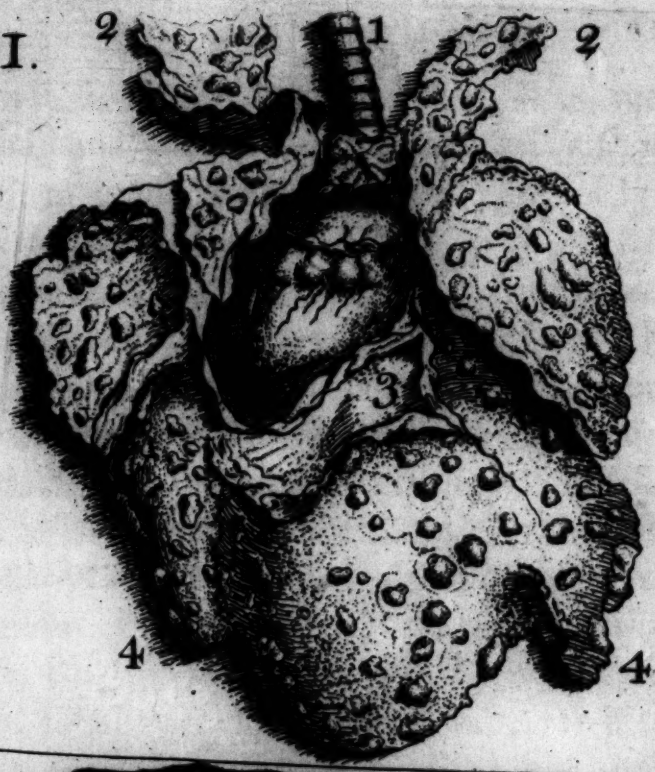


Plate II.



Fig. 1. *Part of the Windpipe.*
Fig. 2. 2. *Lobes of the Lungs.*
Fig. 3. *The Heart, & part of the Diaphrag*
Fig. 4. 4. *The Liver full of Tumors, partly distended with Pus, and part with Water.*

A DISSERTATION ON A GLANDULAR CONSUMPTION, &c.

THE *Conſumption* which greatly afflicts our Iſland, and in the Cure of which, our Phyſicians find the greateſt Difficulty, generally proceeds from a long continued Fluxion on the Glands of the Wind-Pipe, and its Branches, of the Lungs and other internal Parts. And this Diſtemper frequently arrives to ſuch a State, before a Phyſician is conſulted, that it is incurable: For it is in vain to expect a Phyſician ſhould preſerve the ſmall Veſſels from Ruptures, and keep the Fluids in a healthy State, when they are already burſt and often eroded, not without the Diminution or Injury of ſome noble Part which Nature requires for the Continuance of Life, and which Art cannot reſtore; and when the Texture of the Fluids is already altered and vitiated by the purulent Matter reſorb'd by the Blood, and circulates with it in a mingled Stream.

When this is the State of the Diſeaſe, we are not to ſeek for a Cure, but rather a new and miraculous Reſtoration of the Parts deſtroyed; and this is the Reaſon, that this Diſeaſe is eſteemed mortal by common Conſent; becauſe it generally has made too great a Progreſs, before a Cure is attempted. So that upon my enquiring the Opinion of an eminent Phyſician, concerning a very dear Friend of mine, he told me, *He was in a Glandular Conſumption, of which none ever did recover, nor ever would recover*; which is true of thoſe who have the Glands of the Meſentery or of the Lungs, or other internal Parts, filled or vitiated by the Retention of *Pus* or purulent Matter.

This being the Caſe, I hope my Studies will prove acceptable to my Country, if by the Aſſiſtance of *Sea Water*, I can relieve the Diſorders of the internal Glands, and ſeaſonably procure a Remedy in the *Beginning* of this moſt dangerous Diſeaſe; and preſerve the Lungs, that noble Part, from an Impoſtume. I ſay in the *Beginning*, becauſe, if the *Pus* or Matter is already generated, there is then no Help to be expected from this Remedy. This ought to be well conſider'd, becauſe where a Cure is attempted in vain, though the Caſe is incurable by all the Power of Phyſick, it often happens that the Medicine is blam'd and rejected, as uſeleſs and of no Merit; and is thought incapable of doing

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ing what is really in its Power to perform. And this is the common Misfortune of all new Medicines; for I have myself seen some Patients seeking Relief from *Sea Water*, when the purulent Matter was already form'd both in the external and internal Glands.

But what Applause can a Remedy receive from such Circumstances, or rather what Disgrace is it not like to meet with? For in those I have seen, who died of a Consumption where the external Glands emitted *Pus*, and whose Bodies were allowed to be opened, I never met with any in which the Glands of the Mesentery remained entire; on the Contrary, they were generally impostumated; and further, the Bronchia and the Glands of the Lungs, were so universally overspread with *Pus*, that wherever I made Use of the Knife, I could not help cutting the purulent Glands, which before they were open'd, look'd like Grains of Corn full of purulent Matter, pretty nearly resembling the miliary Glands found in a meazled Hog. *See* Figure I. *which represents the Liver and Lungs of a Hog, wherein the Glands of those Parts are strangely morbid.*

And indeed the Diseases of the Glands are more common, and rise to a greater Height in these than in most other Animals. Wherefore the Inhabitants of the Eastern Countries avoid eating Swines Flesh as much as they can; and

becauſe theſe Countries ſeem to be more afflicted than others with the Leproſy, Foulneſſes of the Skin, and all Glandular Diſeaſes; therefore, I judge, the celebrated Legiſlator of the *Jews* ordained ſo many Ablutions, and alſo Abſtinence from Swines Fleſh.

The internal Tumors of the Glands before deſcribed, undergo the ſame Changes as thoſe that are external; therefore, they are to be reſtrained by the ſame Methods; likewiſe, every State of the Tumor has its peculiar Indication; but I think it needleſs to repeat thoſe innumerable Diſtinctions that are commonly made; for they are generally divided into various Kinds, which are trifling and obſcure; and conſequently are more likely to lead the Reader into ſilly Diſputes, than to throw any Light upon the Subject itſelf. Therefore, as my Deſign is chiefly to explain and illuſtrate the Method of Cure; I ſhall only ſay, that theſe *Tumors are called by* Paulus Egineta, *indurated or harden'd Glands*: And by Ætius, *whitiſh Fleſh eaſily encreaſing, contained in a Membrane, and growing hard upon the Surface of the Glands* which ariſe in the Neck, *&c.* and theſe Deſcriptions ſeem to me ſo accurate and perfect, that there is no need of any other.

I find moſt Authors greedily embracing certain hidden Cauſes, from which, as from Principles, they

they would have all Diſtempers proceed; but I think it proper to ſet all theſe aſide, becauſe they are for the moſt Part doubtful and obſcure, and fit to create Diſputes. Therefore, I ſhall only add two Obſervations which perhaps will be of Uſe to illuſtrate this Matter. The firſt is, that ricketty Children, and thoſe that are affected with any Weakneſs of Body from the Cradle, and thoſe that by bad nurſing are of an infirm and lax Habit, are moſt liable to this Diſeaſe. The other is, that all thoſe Remedies which the Ancients us'd in theſe Caſes, were contrived to correct Acidities in the firſt Paſſages, and to prepare a ſweet Chyle to improve the Blood.

I believe, no body doubts that this Diſeaſe is often cauſed by the Fault of the Nurſe, or the too great Indulgence of the Parents. For it is ſcarcely to be told, how often the Foundation of this Diſeaſe is laid in the Cradle; for at that Time of Life when the Child ought by Degrees to be uſed to the Changes of the Seaſons, which Nature ſeems to require; then you ſhall find it ſmother'd in Blankets, its Health impaired with Sweating, and the Heat of the Chamber, and by continuing at the Breaſt too long.

In the mean Time the Bowels of the Infant are conſtantly fretted with an acrid, ſour Milk; this produces frequent, and green acid Stools; till ſometimes, neglecting proper Remedies, it

brings on Convulſions and Epileptic Symptoms. In this Caſe, the Nurſe perhaps gives the Child a little Syrup of white Poppies, or ſomething more powerful, to procure them both a little Repoſe.

It is a plain Sign in ſuch Children, of the ſudden Paſſage or Change of the Diſeaſe from one Kind of Glands to another; becauſe when thoſe Evacuations ceaſe which proceed from the Glands behind the Ears, then the Infant falls into the forementioned Gripes, accompanied with a ſlight Diarrhœa; which if you ſtop by Diaſcordium, or any other Medicine, either the Diſeaſe is transferr'd to the Skin, or the Evacuation is renew'd by the Glands behind the Ears, or by the inguinal Glands, or ſome of the larger Emunctories.

But to return to the pernicious Cuſtom of the Nurſes. Whilſt the Child by a too long continued Uſe of Opiates, is lulled to ſleep, Chylification is perpetually injured; the Habit of Body which Nature perhaps intended to be ſtrong and healthy, by theſe Means is render'd lax and weak; the Blood becomes ſerous, pale and morbid; the Bulk of the Glands, which Nature deſign'd to moiſten the Joints, daily increaſes, and the Heads of the Bones grow large; then the Glands of the Meſentery, of the Breaſt, and the Neck are obſtructed; and at Length

he Glands of the Lungs are infected with the common Taint.

And in all these Disorders, though the superfluous Humours may be carried off, in Women, by the Help of the Menses, and by other Means in Men, while young; yet when they advance in Years, commonly after forty-five; or whenever these Helps fail, then the Glands before vitiated and relax'd, are attack'd with new Obstructions, incline to inflammatory Diseases and suppurate, insomuch that the Patient dies of a purulent Pthisis, unless the Disease is stopt in its Progress; for when once the Pus is fixt in the Glands it requires the Hand of the Surgeon, and not the Art of the Physician.

Some Time ago, I visited a Gentleman after a Fit, as he thought, of an intermitting Fever, for which he had taken the Bark; but finding his Pulse quick, accompanied with a certain hectic Heat, I judged the Shiverings were symtomatical, and that Pus was form'd in the Liver; for his Eyes were tinged with a yellowish Colour. His Habit of Body was full and inclining to Fat; and till that Time he had not been troubled with any violent Disease; having tried all Manner of febrifuge Medicines, I persuaded him to go to *London*; from thence he went to *Bath*, and returned again to *London*; at last he came back into the Country,

where he died of a purulent Dropſy. After his Death, I found a vaſt Abſceſs in the convex Part of the Liver; ſome other Glands were burſt, which had emitted a little Pus and Water into the Abdomen. But in the Lungs, where an Obſtruction began to be formed, there appeared only ſome crude Tubercles, without any Pus.

I think this is a plain Demonſtration that ſome Glands vitiate others, and arrive at a State of Suppuration by ſlow Degrees, and not by a ſudden Progreſs.

I have alſo ſeen a large Tumor, to which ſeveral Cluſters of morbid and ſchirrous Glands adher'd; the Tumor was diſtended by a Matter like Bran, weighing eight Ounces, the Coat of the Glands was like the Membrane in the Gizzard of Turkey-Cocks, and other grainivorous Fowls; it was burſt, and emitted Water conſtantly from the broken lymphatic Veſſels thro' a ſmall Paſſage under the Nipple; and was attended with no bad Symptoms for thirty Years. And although the Glands that adhered to the Tumor had at Length turned perfectly ſchirrous, yet the Tenſion being removed by the Emiſſion of the Humour before deſcribed, the Tumour was free from Pain, and no Suppuration aroſe in all that Time in any adventitious Tumors. *See* Figure II. *which repreſents one half of the cyſtic Tumor with its ſcirrhous Glands.*

I think

I think it alſo plainly appears from what has been ſaid, that in the foremention'd Diſtempers, where the Pus was form'd before the Cure was undertaken, that neither *Bath* nor *Sea-Water*, nor any other Medicine could be of great Service. But here we are not always to blame the Negligence of the Patient, for delaying the Aſſiſtance of Phyſic; for oftentimes the *Pus* is concealed in ſome unperceived Tubercle, and the Caſe becomes deſperate before the Patient perceives any Diſorder.

But I am now to conſider the Diſeaſes of the Glands, in doing which it will ſufficiently anſwer my Deſign to give a general Idea of diſtemper'd Glands. I judge the Diſeaſes of diſtemper'd Glands, to ariſe commonly from certain Obſtructions proceeding from ſome Fluxion flowing faſter upon the Glands than can be tranſmitted thro' their Tubes: Hence the Glands ſwell, their Coats are diſtended, and yield by Degrees to the growing Tumor, till the ſmall Veſſels burſt, and *Pus* is form'd; or from the Tumors confin'd in a Membrane, either a * *Steatoma*, † *Atheroma*, or ‖ *Meliceris*, or ſomething of this Kind is produced.

* *Steatoma* is a hard indolent encyſted Swelling, which contains a Matter like Suet, of the ſame Colour throughout.

† *Atheroma* is an encyſted Tumor, which is a little ſoft, without Redneſs, Heat, or Pain. It contains a whitiſh Matter like thin Paſte.

‖ *Meliceris* is a round Swelling, void of Pain, eaſily yielding to the Fingers, and contains a yellow Matter like Honey in its proper Bag.

But thoſe Remedies of the Ancients before-mention'd, for the lax and infirm Habit of their Patients, ſuggeſt to me theſe two Obſervations; one, that by giving thoſe Medicines which deſtroy the ſharp Humours, and correct the Acidities collected in the Stomach and Inteſtines, a ſweeter and more healthful Chyle is produced; Flatulencies are repreſſed in the Bowels; and hence the Liver, Spleen, Pancreas, and Meſenteric Glands, are leſs obnoxious to Obſtructions; the *other*, that by *Sea Water* joined with other Medicines, the Glands may be ſucceſsfully purg'd, and freed from Obſtructions; after which, it will be neceſſary to ſtrengthen the whole Habit by cold Bathing in the Sea, and ſo fortify the Conſtitution againſt new Fluxions.

Hitherto I have treated of the Nature of diſtemper'd Glands in General; but now I proceed to their different States; of which a recent Fluxion on the Glands is firſt to be conſidered; then the State of Augmentation; then the State of Inflammation; and laſtly, the Termination of the Diſeaſe, either from diſperſing the Tumor, or its turning into *Pus*, a *Schirrus* or a *Cancer*. And as my Deſign is principally to point out a Method of Cure in theſe Diſorders, I think it proper to begin with the morbid State of the tracheal and pulmonary Glands.

When the concatenated Glands of the Neck, which are as it were linked together, and proceed

ceed from the Ears to the Collar-Bones according to the Courſe of the Veſſels of the Neck, appear ſwelled, and the Tonſils ſeem larger than uſual, then there is Reaſon to ſuſpect, that the internal Glands of the Meſentery and the Lungs, are affected by a recent Fluxion. But while there is no Fever, Aperient Medicines, with *Sea Water*, having firſt taken away ſome Blood, will effect a Cure; and theſe Steps are to be taken, though at the firſt Onſet you find the Diſorder is in the ſecond Degree, or the State of Augmentation; for as the Glands are diſtended, ſo they ſubſide by Degrees; and a ſufficient Time muſt be allowed, not only to deterge and cleanſe the ſmall obſtructed Tubes, but alſo to procure a ſafer and fitter Vent, by which the Humours that create Obſtructions may be expelled.

And this is to be effected by the eaſieſt and moſt gentle Methods, we are therefore upon no Account to make Uſe of violent ſtimulating Mercurial Medicines, for nothing is more hurtful in Obſtructions of the Glands, than a ſudden and violent Efflux of the Humours attracted towards the affected Parts by large Doſes of *Mercurius dulcis*; which Medicine, if it is ever uſed, ſhould be given cautiouſly and in ſmall Doſes, and ſoon after purged off with *Sea Water*.

All

All the Glandular Secretions, in a healthful State, are perform'd ſlowly, and with Eaſe; therefore all Medicines that are of a Cauſtic Nature, ſtimulate and wound the tender Parts, and excite Pain. Hence either a Tubercule or a morbid Gland, which perhaps might otherwiſe be eaſily cured, if it is haſtened to an inflammatory State, ſuppurates, and the Cure becomes far more difficult. On the Contrary, the Patient will bear the Stimulus of the *Sea Water*, ſix Months without any Inconvenience, and in an obſtinate Diſeaſe of the Skin, I have known a Patient bear it tolerably well for a whole Year.

I inſiſt more ſtrongly upon theſe Matters, becauſe I have known many Patients receive Damage by too large Doſes of *Mercurius dulcis*, who, perhaps, might have received Benefit from this Medicine ſparingly given, and joined with *Sea Water*. But *Sea Water* will heal many Diſeaſes were Mercury is of no Service, and this puts me in Mind of the Caſe of a certain Patient which I ſhew'd to Dr. *Johnſon* and Mr. *Craddock* the Surgeon about the Year 1731.

The Patient was almoſt covered over with a Scorbutic Leproſy, and having thrown off all other Cloaths, lay only in a Gown; almoſt every Part of his Body was excoriated, he had been twice ſalivated, under the Care of Dr. *Tanner*, of *London*, without any Benefit. Yet this violent

violent Diſeaſe was ſubdued by *Sea Water*; but ſome other Diſorders which afflicted the unhappy Patient, remained much in the ſame State.

Another Patient came to me from St. *Thomas's* Hoſpital, whoſe Caſe was not quite ſo bad; he had likewiſe been ſalivated to no Purpoſe, for he was hereby become lean and hectical, and the cuticular Eruptions were ranker and moiſter after Salivation. At firſt, he took Eryngiated Milk, and Vipers Fleſh; by theſe Medicines the hectic Heat abated; and at Length, by the Uſe of *Sea Water*, the Diſeaſe of the Skin diſappeared.

And indeed, where the Diſeaſe is exaſperated by a great Acrimony, and when mineral Medicines do not agree with the Conſtitution, then Water and Aſſes Milk are moſt ſucceſsfully uſed againſt the Scurvy.

I have hitherto treated of Tumours in the States of *Fluxion* and *Augmentation*. I ſhall now proceed to conſider the State of *Inflammation*, that is, when the Diſeaſe is attended with a Fever, and then indeed the Tumours are to be eſteemed true *Phlegmons* [inflamed Tumours] and are to be treated as ſuch.

When a Fluxion, from any Cauſe, falls upon the tracheal and pulmonary Glands, they likewiſe grow diſeaſed, and tumify in the ſame Manner as the external Glands; then the Irritation of the

the Fluxion produces a Fever, there ariſes a hard and dry Cough; the Face and Eyes are overſpread with a Redneſs, a ſhooting Pain of the Head accompanies the Cough. This Cough Proceeds from the frequent Struggles of Nature to burſt the morbid Glands, and thereby to expel the hidden Cauſe of the Tumor, that by this Means the tumified Part might be reduced and reſtored to a healthful State. But in theſe Caſes, I think the *Sea Water* too much irritates the Diſeaſe, for the greateſt Care ought to be taken that *Pus* ſhould not be generated, which is never thrown out of the Lungs without the greateſt Difficulty, becauſe their looſe Texture is ſo apt to retain it. But the minute and tender Veſſels are broken by the continued Coughing; this produces an Hemoptoe, or Spitting of Blood, and afterwards larger Abſceſſes, and the Diſeaſe is terminated by a purulent hectic Fever.

But in this Caſe a new Method of Cure is to be purſued; for Bleeding muſt be uſed at proper Intervals, until the gelatinous or Buff Coat of the Blood, that reſembles melted Suet, diſappears; which, though it does not appear at the firſt Bleeding, yet is ſcarce ever concealed after the ſecond or third Time. Then Purgatives of Manna, Caſſia, Cream of Tartar, Tartar Vitriolate, or the like, are to be given; and the Patient is to be cooled with Emulſions of Nitre; and

and ſhould uſe Water for Drink, abſtaining from Fleſh, Wine, and all Sorts of Malt Liquors; by theſe Means, generally, all the Signs of Inflammation are removed, the Cough, and the Pain of the Head no longer afflict the Patient, the Tumors ſubſide, and though they are not entirely diſperſed, yet by theſe Methods, like the external Glands, when they are in the ſame State, they are free from Pain, and are no great Trouble to the Patient. But if this Method is either neglected, or too ſparingly, or too late purſued, then *Pus* is generated in the Glands, and the Patient, as I ſaid before, is taken off by a hectic Fever.

Although in theſe Caſes we perceive many Glands burſt, and the *Pus* thrown out, yet we muſt not terrify the Mind of the Patient, we are rather to give Hopes that the Lungs may be cleanſed by proper Medicines, by the Nitre of the Air, and by riding; for the Stiffneſs of the Fibres being leſſened, either becauſe the Inflammation is removed by Evacuations, or becauſe the Parts affected have expelled the Burthen that oppreſſed them, and as their Tone is laxer, they are commonly better defended by their own Mucus, and therefore Exerciſe is then ſafer. A Change of Air ought alſo to be preſcribed, and the Mouth and Noſtrils defended from the extreme Chilneſs of the Air, and it is proper to breathe through ſome Covering, while the Parts

are

are weak and tender; for it appears to the celebrated *Boerhaave*, that hard riding againſt a cold Wind, hath often been the Cauſe of a Quinſey or a Pleuriſy.

But *Cælius Aurelianus* greatly approves this Exerciſe, covering the Mouth, 'till the tender Parts can be defended by their own Mucus.

Therefore, it is evident, from what has been ſaid, that in the inflammatory State of the pulmonary Glands, both the Mind and Body are to be kept very quiet, until, by Venæſection, Lenitives, and nitrous Medicines, the Tenſion of the minute Veſſels is relaxed, and the Fluids freed from the Danger of Extravaſation. For in the State of Tenſion, the Contractions of the Heart are too frequent, the Arteries are irritated, and the Blood circulates too quick. Whence the Inflammation increaſes, the Blood being driven with a great Force, into the ſmall obſtructed Tubes, which can neither bear its Impetus, nor afford it a Paſſage in this State of Obſtruction; therefore the Tenſion of the Veſſels is neceſſarily augmented, and, without Help, an Extravaſation muſt follow; therefore, all Irritation is to be avoided as much as poſſible, that we may preſerve the Veſſels of the Glands ſound and entire; becauſe upon this Circumſtance, the Cure of the Patient entirely depends.

Sometimes

Sometimes alſo the Coat of the Gland grows thick, and the *Pus* is confined as in a ſtrong Bag, from whence it cannot break out a long while. But, in this State of the Diſeaſe, neither *Sea Water*, nor any other Medicines can do any Good. The Cure muſt now be performed by the Art of Surgery only.

But I ſhould be unjuſt not to give *Sea Water* its due Praiſe; for it is certain, that I have ſeen few Tumors of the morbid Glands, which, if the *Pus* was not formed, I could not preſerve from it, and afterwards diſperſe; and alſo reſtore the firſt Form and Magnitude of the Glands, by a due Treatment of the glandular Secretions.

For theſe Reaſons, in the inflammatory State of the Glands, all aloetic, roſinous, and mineral Medicines, are carefully to be avoided; the unſkilful or leſs cautious Uſe of which is always attended with the worſt Conſequences, which will appear plain by what follows in the Section concerning the Uſe of *Sea Water* in bilious Colics. The ancient Phyſicians ſhunn'd theſe Medicines, for they never uſed to preſcribe ſtrong Emetics or Cathartics, 'till the Stiffneſs or *Criſpitude* of the Fibres was ſuppreſſed; therefore, before the Uſe of Hellebore, they judged the Body was to be moiſtened and relaxed by warm Baths, and a diluting and cooling Regimen, abſtaining from Exerciſe, Fleſh, and Wine; and indeed, through the

the whole inflammatory State, where there was the leaſt Fear of Suppuration, they uſed theſe Medicines with the greateſt Caution, or entirely rejected them. And this Practice of the Antients ſeems to be deduced from hence, becauſe they found that a Suppuration was generally the Conſequence of this Method of Cure; which ſeems to be confirmed by *Geſner*; for when the Plague raged at *Zurich*, he obſerved that Hellebore forwarded the Suppuration of the peſtilential Buboes.

Therefore in the firſt Days of the inflammatory State, they uſed to abſtain from the ſtronger Cathartics, that is, 'till the Veſſels were relieved, and, either by Venæſection, by Sweating, or by ſome other Aſſiſtance, were delivered from the great Fear of Tenſion; which otherwiſe the Stimulus of a Cathartic might occaſion. Therefore, where a Cathartic is given, not to expel any prevailing Humour, but to diminiſh a Plenitude, and diſcharge the Superfluities of the firſt Paſſages, which burthen the Tone of the Solids, and in a manner oppreſs them, there this Method is always to be uſed, which proceeds moſt ſucceſsfully by Lenitives.

And this ſhall ſuffice, concerning the Glands in an inflammatory State. Let us now conſider the *Termination* of the Diſeaſe: And in the firſt Place, that *Termination* obtained, by *diſſipating the*

the Tumors, (which is the only *Termination* to be wiſhed for) at the Time that the Fever is abated; ſo that the violent Motion of the Heart is appeaſed, and the frequent Contractions of the Arteries are reſtrained: The Fluids more attenuated and apter for Circulation: And the Glands before obſtructed, are partly reſtored to their proper Functions, and then a perfect Eaſe enſues: The Veſſels are preſerved entire, and their Fluids are confined within their common Bounds of Circulation; but the Tone of the Solids remains weak and relaxed from the late Fluxion; and though the Magnitude of the tumified Glands is diminiſhed, yet there ſtill remains a little Swelling, but without Pain; and this Eaſe continues as long as no new Fluxion happens; for if that returns, the Glands are preſently diſtended again.

Hence it happens, that moſt Patients ſay the Tumors encreaſe, and grow painful, in the Beginning of every Month; and frequently imagine that they encreaſe and diminiſh by the Influence of the Tides, and of the Moon; whereas about that Time the weak Parts are only loaded with a certain periodical Plenitude, which is afterwards expelled by the Strength of Nature, in the ſame manner as the Sex is relieved by the Eruption of the Menſes: For at that Seaſon, not only Tumors, but the Breaſts alſo, and the whole

Syſtem

Syſtem of the Glands are diſtended from the ſame Cauſe.

In this State of Diſſipation, when the Glands of the Neck are grown ſofter, and the internal Glands continue weak and relaxed, by the Removal of the late Fluxion, I preſcribe the *Sea Water* with Succeſs, and join to its Aſſiſtance the Aſhes of ſubmarine Plants, Sal-Ammoniac, Æthiops mineral, Antimony, Cuttle-fiſh Bone, burnt Pumice-ſtone, Coral, Coralline, burnt Sponge, and the like Medicines; which I have found uſeful, either from the Practice of the Antients, or my own Obſervations. Whatever helps I uſed to ſeek from external Applications, I ſhall freely declare, either when I come to explain the Method of Cure, or in relating the ſeveral Caſes of the Patients hereafter deſcribed. In the mean Time, it is to be obſerved, that every Cure ought to be terminated by cold bathing in the Sea; which, when it is not ordered before the proper Time, that is, before the Glands are mollified by the internal Uſe of *Sea Water*, it greatly conduces to a perfect Cure. And laſtly, to prevent a Relapſe, as the Antients made uſe of Gall-nuts, and other ſtyptic Medicines, ſo I uſe to join the Bark to cold bathing, and chiefly in Diſeaſes of the Ciliary Glands, when the Eyes are ſubject to frequent Inflammations; but then the Eyes alſo are to be waſhed every Morning, with cold *Sea Water*.

I have

I have now gone through that State of the Tumor, *viz.* of *Diſſipation*; which is the firſt Species of the Termination of the Diſeaſe, wherein the Glands are reſtored in Part to their Functions, and a healthy State, without the Rupture of any Veſſels. But as every kind of theſe Tumours do ſometimes terminate in a *Scirrhus*, which was the third Species of the Termination of the Diſeaſe; for concerning the ſecond, which was from the *Pus*, I have treated of it before, and ſhall mention it again; it is therefore neceſſary I ſhould explain what I call a *Scirrhus*.

I call that State of the Tumor a *Scirrhus*, when from any Cauſe the Parts cohere a long Time, and from thence are ſo ſtrongly joined and hardened, that they can never be diſunited, nor reſtored to their former healthful State, nor can their obſtructed Veſſels be opened by any Power of the Arteries; but oftentimes the Hardneſs encreaſes to that Degree, that the Tumours in ſome ſevere Caſes are like a Stone, and ſuch I call a perfect *Scirrhus*; and this admits no Cure by *Sea-Water*, or any other Means, but by manual Operation. But the ſlighter Scirrhoſities, if I may be allowed to call them ſo, without excepting any, are curable, if the glandular Secretions are ſkilfully treated; for I have cured many by this Method, that ſo nearly reſembled a perfect Schirrhus, that there appeared but little

Hopes

Hopes of a Cure, and yet the Patient was perfectly cured.

But ſometimes the *Scirrhus* produces a *Cancer*, when the Hardneſs encreaſes to that Degree, that the Circulation is ſtopped through the whole Tumor, and the Veſſels are ſomewhere burſt; then they are a little diſtended by a livid Ichor that diſcolours the Skin, from whence the Phyſician or Surgeon has Reaſon to foretel a Rupture of the Tumor. Theſe are like Cancers, of a livid Colour, and like a Kind of *Ecchymoſis*, or rather, as I think, like thoſe lymphatic livid Veſicles, or little Bliſters, that uſe to riſe in the Parts of the Body, at the Beginning of a Sphacelus.

But when after the burſting of the Ichor remains a long while out of the Laws of Circulation, and has acquired great Acrimony, which ſoon happens in the extravaſated Fluids of all Animals, then the Contagion of this Acrimony is communicated from one Gland to another, and by Degrees the whole Syſtem of the Glands is ſeized with a Cancer; and this Acrimony is ſo virulent, that ſome Writers think it partakes of the Nature of Arſenic, and this is the Cauſe that it produces ſuch large Eſcars in one Night's Time. Indeed, in this irritated State, the Uſe of *Sea-Water* ſeems to cauſe too much Irritation, but I have not yet made Experiments enough to determine this perfectly.

And

And thus I have conſidered the *four* different States of the morbid Glands; and from what has been ſaid, it will appear, that there is little to be expected from *Sea-Water* in a true and perfect *Scirrhus*, nor in any Tumors contained in a Bag, or in an Atheroma, Steatoma, or Meliceris, or where the Matter extravaſated is contained in the Middle of the Gland, like a Kernel in its Shell, before the Uſe of *Sea-Water* is begun, which nevertheleſs very ſeldom happens after the Cure is begun by this Method: Nor in a true Cancer, nor in Ulcers with a Caries, where an Exfoliation is required. And yet I have ſeen ſome of theſe Caſes cured, though the Glands were diſtempered at the ſame Time.

This is the Courſe of a Cure attempted without Succeſs; let us now take a View of the Succeſsful Cures, and ſee what Aſſiſtance we may expect from *Sea-Water*; the Diſeaſes therefore that are curable by this Method are as follow:

1. All recent Obſtructions of the Glands of the Inteſtines and Meſentery; for by this Method Tumors are diſperſed, and the baſtard Iliac Paſſion is often prevented.

2. All recent Obſtructions of the Glands of the Lungs, and other Bowels, which often cauſe a Conſumption; for by this Method a certain continual and daily Secretion is performed by the inteſtinal

inteſtinal Glands, and thus the Fluxion is drawn off from the Lungs, whereby the Cough ceaſes, before an Abſceſs is formed, and the impending Danger of a Conſumption is removed; which, as *Sydenham* rightly obſerves, often proceeds from the Violence of frequent coughing; for this weakens the Lungs, and excites Tumors: They grow inflamed, maturate and erode the lax and tender Parts, ſo that in a ſhort Time the Diſeaſe is got beyond the Power of Medicine.

3. Recent Tumours in the Glands of the Neck, or in other Parts of the Body.

4. Recent Tumours of the Joints, if they are not ſuppurated, and are neither turned to a *Scirrhus* nor Cancer, and do not proceed from a Caries of the Bones.

5. Recent Fluxions on the Glands of the Eyelids, from whence proceed Lippitudes.

6. All Foulneſſes of the Skin, from an Eryſipelas to a Leproſy.

7. Alſo Diſtempers in the Glands of the Noſtrils, with a Swelling of the upper Lip: And theſe are eſteemed very difficult Caſes; but even theſe are conquered by this Method.

8. Obſtructions of the Kidneys, where there is no Inflammation, nor any Stones too big to paſs through the urinary Paſſages.

9. Re-

9. Recent Obſtructions of the Liver; for by Sea Water the Body is kept open, and thoſe Medicines that are given in the Jaundice receive hereby more Power to exert their Virtues.

Now if I were more minutely to explain the Nature of recent Fluxions upon the inteſtinal Glands, it would be proper to deſcribe thoſe Glands; but this is unneceſſary, and therefore I ſhall only add this Remark, that the whole alimentary Tube is in a manner overſpread with Glands, and is therefore liable to the ſame Diſorders as the Glands of the Lungs; but with this Difference, that in the Tumors of one the *Sea Water* cannot be applied to the Part affected, as it may be in the other, and therefore the Benefit appears the ſooner.

Therefore, where Fluxions have a long Time oppreſſed the Glands of the Inteſtines, they become hard and ſcirrhous: Then the *Rectum* is moſt grievouſly obſtructed with Tumors; the Stools are accompanied with a vehement Pain, and the Excretions often contain only a Matter like Ichor, which injures the Neck of the Bladder by the nearneſs of the Part, and at the ſame Time excites a Strangury, and a moſt painful Teneſmus. In theſe moſt ſevere Caſes, if the Parts are not inflamed, or if they are only injured by the Compreſſion, or if they only ſwell, then the *Sea Water* chiefly produces two good Effects: One is, that hereby the Belly is moſt ſafely preſerved

from the Danger of Conſtipation; the othe
that it is a better Diſcutient than all other Me
cines. And indeed, the Antients uſed the *S*
Water in theſe Diſeaſes; for *Pliny* ſays, *the Ph*
ſicians think Sea Water *alone more effectual*
diſperſing Tumors. And in the ſame Author w
find this Remark, *Some Phyſicians preſcribe t*
Sea Water *in a Quartan Ague, and in a Tene*
mus, L. 36. c. 6.

But when theſe Diſtempers are neglected,
unſkilfully treated, they ſometimes turn into Ca
cers; where, if there is too much Acrimon
this Method of Cure is ineffectual. Sometim
they turn into the baſtard Iliac Paſſion; that i
when Tumours are ſeated in Part of the Inte
tines. I ſhall here inſert a Caſe of this Nature
which, while I am writing, occurs to my Mind

There came to me a Gentleman of a good Fa
mily, about forty Years old; he had a Tumor o
the Kind before deſcribed, which adhered to th
Inteſtinal Tube, below the Region of the Spleen
When the Patient was entirely free from vomit
ing, I could feel the Tumor with my Hands,
which was round, and as big as a large Tennis
ball. He had no Fever. After a copious Eva
cuation of the Excrements, by vomiting, the Pa
tient remained eaſy for ſome Days, 'till the Sto
mach and Inteſtines were again ſtuffed with Fæ
ces, and then they were again ejected by the
Mouth. All Means were tried in vain, for no
thing

thing would pass by Stool; but the Iliac Symptoms were renewed at ſtated Times, that is, between every ſeventh and tenth Day. He languiſhed in this Diſtreſs ſeveral Months; firſt at *London*, under the Care of Dr. *Pellet*, my very learned Friend, for whoſe Memory I ſhall always have the greateſt Veneration; then at *Bath*, under the Care of Dr. *Bave*. At laſt, he returned to me, in the ſame Condition as at his Departure: And becauſe he was ſurprizingly waſted, I had the faireſt Opportunity of inſpecting the Tumor; but there was no Hope of Relief; he died ſoon after.

But if I had known at that Time, as well as I do now, the Uſe of *Sea Water*, perhaps there might have been ſome Hope in this Caſe; for I am not acquainted with any Medicine that is ſo powerful a Diſcutient as *Sea Water* taken inwardly, or that ſeems ſo well adapted to the Cure of the forementioned Diſeaſe: But in this Caſe it ought to be given alone, to keep the Body open, and this ſhould be done before the Obſtruction was quite confirmed in the Inteſtines. There is alſo this Benefit attending this Method, that *Sea Water* promotes Digeſtion and Chylification.

And this is well known to thoſe who cure Cattle and Sheep; for when a Beaſt ceaſes to chew the Cud, and it appears from thence, the Digeſtion is injured, and there is Danger of loſing

ſing the Animal; they preſently reſtore Digeſtion, by repeated Draughts of ſalt Water, or by large Boluſes of Sea-Salt mixed with Honey. This Courſe is continued 'till the Paſſage of the Inteſtines is opened.

When I found theſe Things were ſo, it was plain to me, that the Uſe of *Sea Water* would be very beneficial to Sailors in bilious Colics, both to prevent the Invaſion of the Diſeaſe, and its Return after the Cure. This laſt is to be effected by a *Semicupium*, or half Bath, and purging Salts, after the Inflammation has been removed by Bleeding. And I am informed by my Friends, that this Method is ſucceſsfully practiſed. Many of theſe Diſtempers are produced in the following Manner: many Seamen, eſpecially freſh ones, not uſed to the Sea, are commonly ſeized with a Nauſea, and Vomiting, which commonly attacks Paſſengers, when the Ship firſt gets under ſail, and this affects ſome longer than others. While he continues in this Condition the Belly is bound, and the Sailor ſeldom recovers 'till it is opened. At the ſame Time very little Food is taken, and recourſe is had to ſpirituous Liquors for Aſſiſtance. Then, if they ſail to a warmer Climate, there is a more copious Evacuation by the Skin, and therefore leſs by the Glands of the Inteſtines. A great Quantity of Bile is thrown up by vomiting, the Fæces become whitiſh and dry, as in the Jaundice, the Bowels

Bowels are obſtructed, and the Foundation is laid of a future Inflammation; for the Fibres, in theſe Circumſtances, are dry, and deprived of that ſoapy Bile, which ought to give an eaſy and ſlippery Paſſage to the Fæces. This, among many others, is one Cauſe of the inflammatory Colics that happen to Sailors.

Being willing to get a true Knowledge of this Matter, I enquired of ſeveral Maſters and Surgeons of Ships, and by their Deſcriptions I found this Diſeaſe had the Symptoms of a Bilious Colic; and underſtood that the Cure was commonly attempted by Aloetics, Scammony with Calomel, which, tho' joined to an Opiate, the Stomach of the Patient would often throw up; then followed a black Vomiting, and there being no Evacuation downwards, the Inteſtines mortified, and Death ſoon enſued; therefore, I thought it would be a uſeful Undertaking, and acceptable to Sailors, who ſeem by Nature deſigned for the Defence of this Iſland, if I could diſcover a ſafer Method of Cure in theſe Caſes. For this Purpoſe, when the Colic proceeds from the Body's being coſtive, and the Patient has no Fever, then a Pint at leaſt of *Sea Water* is to be given every Morning. If this is taken in the firſt Stage of the Diſtemper it will preſerve the Patient from any great Danger. But if it is neglected in the Beginning of the Diſeaſe, and an Inflammation appears, with a Fever, Vomiting,

and difficult Stools, or none at all, then there is Danger of the Iliac Paſſion, which is attended with a black Vomiting, and the Fæces are thrown up at the Mouth, the Pulſe is quick, but weak, followed with cold Sweats, and the Patient dies of a *Sphacelus*, or Mortification.

Sometimes indeed, after Shivering, Pus appears in ſome Part, which prevents immediate Death: But for the moſt Part, a purulent Teneſmus afflicts the unhappy Sufferer.

I have had an Opportunity of converſing with many Perſons, Practitioners at Sea, as well as others, from whoſe Accounts I have deſcribed this Diſeaſe. And that the common Method, which is, ſo dangerous, might be laid aſide, I perſuaded Mr. *Leith*, a Surgeon in the Royal Navy, to take a new Courſe, which was, as ſoon as the Symptoms of Inflammation appeared, to bleed freely, and repeat it as Circumſtances required, if neither the Pain nor the Fever abated: That no purging Medicine ſhould be given, not even *Sea Water*, 'till a ſufficient Revulſion was made by Bleeding, and emollient Clyſters. Inſtead of Aloetics and Scammony with Calomel, I deſired him to give the following Bolus.

℞ *Of Tartar Vitriolate two Scruples, or a Dram, Salt of Tartar eight Grains, or half a Scruple, chemical Oil of Nutmegs one Drop, Lenitive Electuary enough to make it into a Bolus.*

To

To be taken every four Hours 'till a free Evacuation by Stool is obtained.

He uſed theſe Means with great Succeſs in theſe Diſtempers, for at his Return he thanked me for this Preſcription; and though during his Voyage the Sailors were attacked with Colics more frequently than uſual, from their Intemperance and a Plenty of bad Wine, yet almoſt all recovered by this Method. After proper Bleeding, two or three Doſes in the moſt obſtinate Caſes, generally open'd the Body, and then the Danger was over. When the Inflammation was removed, the Patient was eaſily preſerved from the Danger of a new Attack by taking *Sea Water* every Day, or every other Day.

I have ſeen many violent Colics cured by this Method, where, if the Caſe required it, I uſed to order a Half-Bath before Purging; for though I have ſometimes ſeen Dr. *Fuller*'s Colic Pills and ſimilar Medicines, given with Succeſs, yet while the Inflammation continues they are attended with Danger. But that which ſhould chiefly deter us from the common Method, is; that if thoſe Particles, whether roſinous or gummous, do not open the Body, they muſt enter into the Blood, and thereby encreaſe both the Fever and the Inflammation. On the contrary, if the ſaline Medicines are not evacuated, but are re-

received into the Blood, they are cooling and reſtrain Inflammations and Abſceſſes. And further, bitter and roſinous Pills are often rejected by the Stomach, though guarded with Opium; but a ſaline Bolus ſeldom diſagrees with the Stomach, or rather has the Effect of Salt of Wormwood and Juice of Lemons, and take off the Inclination to vomit. Therefore I am of Opinion that Aloetics, Scammony and roſinous Subſtances with Calomel are to be entirely rejected in the inflammatory State of the Colic, and for the great Benefit of Seamen the other Method is to be followed; for it is plain they never want *Sea-Water*, and unleſs my Judgment and Obſervations deceive me, more are cured by that, of inflammatory Colics, than by roſinous Purges, which ſtrongly adhere to the Inteſtines, and alſo encreaſe the Diſtemper.

I believe what I have propoſed will be ſufficient to confirm the cooling Method for the future, which, I think, many Phyſicians do already approve. It is not new, and deſerves to be conſidered with the utmoſt Attention; and becauſe ſaline Purges were uſed ſo ſucceſsfully in theſe Caſes, therefore *Angelus Sala* beſtow'd ſuch high Encomiums on *crude Tartar*. The Doſe is from ſix Drams to an Ounce, in Chicken-Broth. *Sal Gem* has likewiſe met with Approbation; becauſe it has

has been found by Experience to lubricate the Inteſtines, promote Secretion from their Glands; as alſo to ſoften and reſolve the Fœces. There are Inſtances of this Kind to be met with in *Foreſtus*, Lib. 21. Therefore, againſt Coſtiveneſs, a Pint of *Sea Water* is to be drank faſting every Morning, as often as the Caſe requires; which, though perhaps it is not entirely of the Nature of *Sal Gem*, yet it is contained under the ſame Claſs.

And as the Glands of the Inteſtines ſeem to be formed by Nature to draw off and emit whatever is unprofitable to the Body, ſo I believe moſt glandular Diſeaſes proceed from Diſorders of the Glands; that is, when neither the Glands themſelves, nor the Mouths of their Ducts for want of cleanſing, will allow a free Paſſage for whatever may be thrown upon them. I am certain alſo, there are many Diſeaſes of the Skin which owe their Riſe to the Diſorders of the Alimentary Tube. And likewiſe that when other Secretions are deficient, the Glands of the Alimentary Tube are drawn into Conſent, and are affected at the ſame Time. And hence, very probably, proceed all Obſtructions of the Meſentery and other internal Glands. And this commonly happens to Women when the menſtrual Purgations are ſuppreſs'd for many Years, and the Glands of various Parts are

diſeaſed, they labour under a continual Diarrhœa, though without any violent Symptoms, which though it continues ſo long, ſeldom exites a *Teneſmus* or any Signs of Acrimony; for in this Caſe thoſe Humours paſs off by the Glands of the Inteſtines, which in a healthy State ſhould be carried off by other Evacuations.

And how greatly the Inteſtines are adapted by Nature to relieve the Defects of any Evacuation will appear plain by the Caſe of a Boy mentioned in the Philoſophical Tranſactions, who lived to be ſeventeen Years old without any Evacuation by Urine, and yet was briſk, healthy and ſtrong; but he had a continued Diarrhœa, yet without any troubleſome Symptom. Therefore the Defect of the Kidneys, as it appeared to Dr. *Richardſon*, was ſupplied by the Aſſiſtance of the Inteſtinal Glands. See *Philoſoph. Tranſact.* Vol. XXVIII, *Anno* 1713. I alſo knew a Woman who was aſthmatic, and laboured under Obſtructions of the Glands from her Cradle. She never breathed ſo well as when the alimentary Tube was kept open, and its Glands ſtimulated to encreaſe their Secretions by *Sea Water*.

Hitherto I have only mentioned the various Diſtempers of the internal Glands, in treating of which, perhaps, I might have been more

more particular, and extended the Work to a greater Length without being tedious; but I have neither Time nor Inclination to add any Thing that is not requiſite to explain the general Method of Cure. In my Opinion, nothing does more Injury to the Study and Improvement of the Sciences than a too religious (or if I may be allowed the Expreſſion) a ſervile Imitation of the Antients. I mean when a Perſon will upon no Conſideration forſake the beaten Path of the Antients. Neither do I think their Authority is to be entirely rejected, right or wrong; for from their Writings, as from a Spring, we draw the moſt uſeful Aſſiſtances in the Study of the Sciences.

Therefore when I firſt reſolved to write, I thought myſelf obliged to obſerve two Things; *one*, that I ſhould not boaſt of theſe Things as if they were entirely new, and yet I might claim the Credit of having brought a Medicine of the antient Phyſicians again into Practice that had been too little regarded, and of having more accurately conſidered its Qualities; *the other*, that I ſhould not ſervilely confine myſelf to their narrow Obſervations, but ſhould dare to deviate from their Steps where I found juſt Cauſe for it. I ſhall therefore add a few Obſervations, which I found ſcattered in the Writings of the Antients,

tients, which may ſerve to illuſtrate this Subject, by which it will appear what the Antients performed with this Remedy, and this indeed ſeems to be but very little.

And firſt *Celſus* obſerves, in the Chapter wherein he treats of Purging the Body, *Lib.* 2. *Cap.* 12. that two Sorts of Salt Water were uſed by the Antients to keep the Body open, one ſupplied by Nature, the other by Art. *The* Sea Water (ſays he) *is acrid, or common Water ſalted, but both are mended by Decoction.* And afterwards, *The more acrid it is the more it diſcharges.* And *Hippocrates* gave *Sea Water* for a Clyſter: And *Themiſon* alſo, in a Dyſentery, takes Notice, *that the ſharpeſt Brine is to be uſed,* Cel. L. 4. Cap. 15. * Minium *ground with a Pint of Salt is eſteemed powerful againſt a Cancer of the Inteſtines.* At leaſt it is given mingled with Water, *ibid.*

Though the Antients gave *Sea Water* internally in many Diſeaſes, yet they were timorous, and ſaw but little of its Uſe; for they uſed to keep it 'till the Venom of it (as they called it) ſettled, and often ſubſtituted in its Place a Mixture they called *Thalaſſomeli.* The *Thalaſſomeli* of *Dioſcorides* is made in this Manner; Take equal Parts of *Sea Water,* Rain-Water and Honey, mix and ſcum them,

* What the Minium of the Ancients was is uncertain.

and

and let it be kept in a Glaſs-Veſſel, well ſtopt, all the Dog Days. The Antients uſed alſo to mingle *Sea Water* with their Wines, which the Phyſicians preſcribed to looſen the Belly. *Vinum Tethalaſſomenon* is ſaid by *Dioſcorides* to be Purgative, and was made (according to *Pliny*) in this Manner: *The Grapes are gathered before they are quite ripe, and dried in the ſtrongeſt Heat of the Sun, turned three Times a Day for three Days, and ſqueezed on the fourth Day; then the Liquor is to ſtand for ſome Time in the Sun in Veſſels, with which they mix a large Quantity of* Sea-Water. See *Pliny*'s *Nat. Hiſt.* L. 14. Cap. 8. And *Celſus* writes, that this uſed to be given in the Jaundice, L. 3. Cap. 24. *Drink ſalt* Greek *Wine to keep the Body ſoluble.* And in the ſame Chapter, he ſays, that *Aſclepiades made them drink* Salt Water *for two Days for a Purgation.* Alſo *Quintus Serenus Samonicus*, in the Chapter entitled *Ventri molliendo*, writes thus:

Sæpe Thalaſſameli junctum cumulavimus imbri:
Hæc purgant, parili fuerint ſi pondere miſta.

The Antients alſo uſed *Sea Water* to expel bilious Humours, as the ſame *Samonicus* teſtifies

teſtifies in the Chapter entitled *Felli, Vomitui vel Pthiſi arcendis:*

Proſunt & Pelagi Latices, quos pondere juſto
Dulcibus aſſocias Lymphis, melliq; liquenti.

And the ſame Author, on the Gout, writes,

Si vero Articulos tabes inimica per omnes
Hæſerit, ex ſicu betas ac melle ligabis;
Vel Pelagi latices, ſimul & Baccheïa Dona
Sumere curabis: nimio ſed parcite Vino.

Moreover the Ancients made Uſe of *Sea-Water* in the Palſy to ſtimulate the relaxed Fibres. *It is alſo extremely neceſſary to foment the Limbs with* Sea-Water *warmed, or elſe with common Water and Salt*, Celſus L. 3. Cap. 27. In the ſame Diſeaſe they purged the Body with *Greek* Wine ſalted. *But if the Diſeaſe is of long ſtanding*, Greek *Wine ſalted may be given as a Purge every fourth or fifth Day*, ibid.

And here I ſhall inſert a ſhort Catalogue of the Purging Salts uſed by the Antients, all which they ſeem to have diſpoſed in Claſſes according to the Degrees of their ſtrength.

1. *Salt.*

1. *Salt.* 2. *Sal Gem.* 3. *Sal Nitri.* 4. *Indian Salt.* 5. *Flos Salis.**

Then the liquid Saline Purgatives are mentioned.

1. *Sea Water.* 2. *Thalaſſomeli.* 3. *Vinum Tethalaſſomenon*, of which Medicines the two laſt were thought by ſome to purge more gently, although *Dioſcorides* ranks them among the ſtronger Purgatives.

I find many celebrated Authors carried away with the Stream of the Opinion of the Antients, for even *Antonius Muſa Braſavolus*, who had obſerved from *Pliny*, that *the* Sea Water *was injurious to the Stomach*, relates a Kind of an old Woman's Tale hereof, that when he was at *Venice* with *Alphonſus* III. Duke of *Ferrara*, he ſailed out of the Port, but a Storm ariſing, the Waves broke into the Veſſel. But I ſhall add his own Words: *The Water daſhed in my Face, for I could find no Place to ſhun it; ſo that I drank ſome of it againſt my Will, which threw me into a Flux. I expected every Moment to be drowned, for I thought the Veſſel muſt infallibly ſink; ſo I began to think how to eſcape ſuch an imminent Danger; and I could find no other Means of Safety, if the Ship ſunk, than to throw myſelf*

* This is unknown.

upon

upon the Back of the moſt illuſtrious Duke, and there cling faſt; for I knew he could ſwim like a Fiſh: Therefore I reſolved that either he ſhould deliver me from the Danger of the Water; or that we ſhould be drowned together, as he was the Occaſion of my Death. But here I cannot help obſerving, that the moſt illuſtrious Duke was highly obliged to his Phyſician for having meditated a Deſign that was ſo full of Love and Reſpect.

Afterwards, which is ſcarce probable, he relates that he continued in a Flux eight Days from the forementioned Cauſe. *Therefore,* (ſays he,) Sea Water) *purges and offends the Stomach.* See *Ant. Muſa Braſavol.* Page 27. *De Pargantibus.* What would this great Doctor have ſaid if he had lived to ſee this Method of mine, where a Patient has taken *Sea Water* daily for a whole Year, without being heated thereby?

I have alſo taken the following Paſſage from *Fabricius Hildanus*, Obſ. 34. Cent. 2. to *Sennert. But what is your Opinion of the Uſe of Brine in the Plague? I knew a certain Lawyer at* Nuys *on the* Rhine, *who related, in my hearing, that he had often given Brine to his Friends and Domeſtics in the Plague with great Succeſs.* * * * * * *As ſoon as any one was ſeized with the Plague, he gave them a Draught of Brine, and ordered them to ſweat in Bed, and*

and abſtain from any other Drink for ſome Hours. This operated in ſome by Sweat, in others by Vomit, in the reſt either by Stool or Vomit, or both, and cauſed ſuch a copious evacuation, that the major part of thoſe who took it were reſtored to Health, therefore though I would not venture on this Medicine before I had your Opinion of it; yet I think it is not to be entirely rejected; for on Account of the Salt, there is no doubt that it greatly reſiſts the Putrefaction of the Humours. Beſides it opens Obſtructions of the Bowels, and carries off noxious Humours either by Sweat, by Urine, or by Stool. But theſe Teſtimonies are ſufficient.

Having thus premiſed the Effects of *Sea Water* in the Diſeaſes of the internal Glands, let us now ſee what Power it has upon the external Glands; in which as they are more open to the Eye of the Phyſician, ſo the Declenſion of the Diſeaſe and the Effect of the Medicine appears the ſooner; for it is worth obſerving, that the ciliary Glands, when red and excoriated, with ſwelled Eyelids, ſoon grow pale and dry with the Uſe of *Sea Water*, and tend towards a ſound State. The concatenated Glands of the Neck may be alſo ſeen to decreaſe daily, by the ſame Method, and return to their natural Shape when they are not ſuppurated, nor turn'd to a *Scirrhus*. By which Means the elegant Ornament of the

Neck

Neck is reſtored, which the great Author of all Things ſeems to have formed with ſuch Beauty and Dignity, that he might place the Head, being the laſt and moſt perfect Work, upon it as upon a moſt beautiful Column.

From the foregoing Conſideration of the morbid Glands, I think the Reader is prepared and inſtructed to receive and comprehend the following Method of Cure that is levelled againſt tumified Glands by Helps timely interpoſed: Therefore I ſhall proceed to that Part of my Deſign in which I propoſed to explain the Similitude and Agreement of this Method with the Laws of Nature, that it may appear from hence, that Nature generally employs the ſame Aſſiſtances when ſhe alone oppoſes any Diſeaſe with her own Powers. Then we muſt review the Medicines of the Antients and their Method of curing morbid Glands; from whence it will appear how rational and convenient it is to join their Medicines with *Sea Water*, that by their united Aſſiſtance we may diſperſe internal Obſtructions which are always attended with the utmoſt Danger.

And for this Reaſon, when I am ſent for to cure an obſtructed Gland, I always endeavoured to penetrate into the remote and hid-

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den internal Cauſes within; for if the Obſtructions of the Glands of the Meſentery and Lungs cannot be conquered, what Benefit can there be in diſperſing external Tumors? Therefore, I ſeldom apply any outward Medicines before the Glands are mollified and altered by internal Remedies. But as it often happens in theſe Caſes, the Buſineſs is beyond the Reach of Phyſic, and for the Reaſons aforeſaid, requires manual Operation; then, that is, in all external Tumors I leave them to the Surgeon whoſe proper Work they are, who, I hope will diſcover more accurately thoſe Things which I have ſlightly touched, as being inconſiſtent with my little Leiſure and the Deſign of this Work; for my Intention is only to explain the Cure of morbid Glands in that State where the Veſſels remain whole and free from Ruptures: Alſo where the Fluids, though ſomething accelerated, do ſtill obey the laws of Circulation, and ſo the Diſorder is a proper Subject of the Medical Art.

But there is no other Medicine, that I could ever diſcover, which may be ſafely continued ſo long Time, nor that cleanſes and corroborates the obſtructed Tubes ſo well as *Sea Water*; for it has a certain ſoapy Quality as powerful as the ſaline, which cleanſes and diſperſes thoſe viſcid Humours which ſtop and

obſtruct

obſtruct the Mouths of the Lacteal Veſſels, and ſucceſsfully ſtimulates their Sphincters, whence they perform their proper Offices, and promote Chylification as well as in a healthy State. Thus, whatever conduces to the Nouriſhment of the Body is ſeparated, and circulates with the Blood, and nothing is thus ſeparated but what has been well prepared by the alimentary Tube. But when an Obſtruction ariſes in the Lacteal Veſſels, and hence the Chyle is not well ſecreted, or is ſucked out by the Inteſtines, then follows a loſs of Appetite, and the Chyle itſelf, as in the *Cœliac Affection*, paſſes off by the *Anus*, and this produces an Atrophy, or a general Waſting of the whole Body.

That theſe meſenterical Tumors proceed from the Obſtructions of theſe Veſſels, and the Circulation thereby prevented, will appear from that Experiment of our Countryman *Wharton*. *Wherefore*, (ſays he) *the Lacteal Tumors are exceeding ſmall, and perhaps not yet diſcovered by any Perſon; for in diſſecting ſeveral live Animals, having made a Ligature in the Lacteal Veins, between their common Receptacle and the Glands of the Meſentery, and the Paſſage of the Chyle being ſtopt, I have obſerved thoſe Glands to ſwell a little that belonged to the Veins that were tied.* See *Wharton de Glandulis*, p. 47.

I could

I could cite many ſuch Caſes from various Authors, but I chuſe to omit them for Brevity ſake, therefore ſhall only add, that when theſe Caſes are attended with a Hectic Fever, there is a *Pus* ſubſiſting every where; but if it is otherwiſe, and the Diſorder ſeems to be mild, gives Hopes of a perfect Cure. Nevertheleſs, as in theſe better Circumſtances the more lax Parts of the Body are affected, therefore there is Reaſon to be apprehenſive of Danger; for unleſs the Patient has Reſolution to continue this Method a long Time, and will finiſh the Cure by cold bathing in the Sea, it is very probable that upon a Return of a new Plenitude of Humours the Diſorder may be renewed, for the Glands, being weakened by the former Diſeaſe, have little Strength to reſiſt a new Fluxion. I muſt acknowledge there is required great Conſtancy and Reſolution to ſupport the Tediouſneſs of the Cure; but I think it is better to bear this than to ſuffer a languiſhing Death by a Conſumption, or a Rottenneſs of the Bones, which is a common and well known Diſtemper.

I ſuppoſe, now, it is plain that there are chiefly two Cauſes of morbid Glands; one is a Fluxion of redundant Humours upon the Glands; the other is a Weakneſs of the Parts affected, whereby they cannot reſiſt the Fluxion;

Fluxion; and where neither of theſe Cauſes exiſts, no notable Diſorder of this kind can ariſe; for if there is no Redundance there can be no Oppreſſion, and if there is no Weakneſs or Laxity, it follows that the elaſtic Force of the Veſſels will reſiſt the Diſeaſe; but if both theſe Cauſes are abſent no Tumour will ariſe.

But I muſt proceed to explain, as I propoſed, by what Means this Alteration of the Habit is to be effected, and how chiefly ſome Secretions may be directed by the Skill of the Phyſician, and alſo which of them ſeem principally to be formed by Nature to give aſſiſtance to the weak Parts, and to lighten that Burden with which they are oppreſſed; and laſtly, Experience ſhews that in thoſe Caſes which properly belong to the Medical Art, the Phyſician ſeldom wants Succeſs but where the Patient wants Conſtancy.

But in conſidering the Changes of the Animal Secretions, I ſhall only ſubjoin thoſe Laws that are apparent and unchangeable; therefore, I reject the obſcure Terms of Coagulations, Concretions, and hereditary Diſorders; and think I can aſcribe thoſe Diſtempers to more certain and leſs intricate Principles; for whatever Cauſe it may be that throws a Fluxion upon thoſe lax Parts, ſo that the Humour flows too faſt to obtain a

Paſſage,

Paſſage, muſt neceſſarily occaſion Tumors there. I have ſeen Tumors in the Glands of the Neck, that were occaſioned only by the Irritation of Bliſters behind the Ears. And *Wiſeman* mentions the Caſe of a Perſon who lay a Summer's Night upon a Form, but his Head hanging down, while he ſlept, one Side of his Neck lay upon the Edge of the Form. When he awoke he found ſeveral Swellings in the Glands of his Neck, ſome of which were as big as Walnuts.* The ſame Author obſerved, that the ſame happened to Children when the Tonſils were compreſſed by being bound too tight. A Pain in the Breaſt brings a Fluxion on the axillary Glands, and Diſeaſes of the Legs and Thighs cauſe Swellings in the inguinal Glands. Numberleſs Examples of this Nature might be produced.

* *This Paſſage in Wiſeman's own Words is as follows,* Page 392.

I ſhall give you one remarkable Inſtance of a Cook's Servant in the *Old Baily*, who ſleeping one Summer's Night on a Form, his Head ſlipping off, the one Side of his Neck preſſed upon the End of it; when he wakened his Neck was full of *Strumæ* on both Sides, ſome as big as Walnuts, others leſs; they were of different Figures, and diſtinct from one another. The *strumæ* continued, and after a few Days apoſtemated and matter'd, and became virulent Ulcers; he died tabid within half a Year.

A *ſtreight Stay*, as ſome Women and Children wear them, hath too often had the ſame Effect. Pain in the Breaſt makes them under the Arms; and in ill Habits of Body, a ſore Leg hath often cauſed as much in the Groins.

There-

Therefore these evident Causes direct us in the best Way, and point out a Method of Cure; but if the Causes mentioned by other Authors should please some Persons better, such as cancerous, scrophulous and scorbutic Humours, I shall not enter into a Debate, nor add any thing more to make them change their Opinion; but this I will affirm, that there is no better Method of Cure in these Distempers than that performed by *Sea Water*.

SECT. II.

HAVING thus revived whatever belongs to the general History of the morbid Glands, I think it will plainly appear to every Physician, and even to any one unskilled in Anatomy, that he has the Care of a Body fitted with Organs, the Health of which depends upon almost innumerable Secretions regularly performed.

For as the Author of human Nature foresaw that some of these would be obstructed by various Accidents, and less fit for the Laws of Circulation, he formed the Body with plenty of Secretions for the Purpose of mutual Assistance; that when one of these are impeded the Body might be relieved by the Help of the

the others. And indeed Nature cures many Diſeaſes by her own Power after this manner, and for this Reaſon ſhe is properly ſtiled the *Healer* of *Diſeaſes*.

For where this or that Secretion is impeded ſhe commands another to perform its Office more copiouſly, although, perhaps, not ſo conveniently. And unleſs Nature performed this by her own Strength, a little too much Meat or Drink, or the Changes of the Air, or the Seaſons would deſtroy this moſt beautiful Structure, Man.

Upon theſe Conſiderations I always thought it a Matter of the higheſt Conſequence for a Phyſician to imitate, as near as may be, the Proceſs of Nature; and where any Secretion is obſtructed or diminiſhed, to take care to facilitate and encreaſe another.

And indeed Nature takes this Method for expelling Diſeaſes, which otherwiſe uſe to ariſe from obſtructed Glands; and this is effected upon going into a colder Air, the Perſpiration by the Pores of the Skin is ſuppreſſed, when a ſudden Fluxion diſtils from the Eyes and Noſtrils, and the Glands of the Mouth and Throat are affected, ſo as to produce the Diſtemper which Phyſicians call a *Catarrh*.

But all theſe are the Endeavours of Nature to throw off the Redundances that proceed

from the obſtructed Perſpiration: And indeed whoever obſerves this Rule of Nature may check the Violence of the Diſtemper. For tho' the larger Emunctories of the axillary and inguinal Glands, &c. afford great Aſſiſtance, yet they are not ſo ſubſervient to the Will of the Phyſician as the Evacuation of the alimentary Tube, which ſeems deſigned by Nature for the ready Diſcharge of any Redundances. And where the Redundance of ſuperfluous Humours cauſes any Complaint, this affords the quickeſt and eaſieſt Diſcharge: Nor is it, perhaps, neceſſary that the Fluids ſhould undergo ſuch a fine Trituration as when they are carried off by Perſpiration.

He that knows how to make a right Uſe of theſe Helps, will direct the glandular Secretions with the greateſt Judgment; and if he does not make a perfect Cure, he muſt certainly procure ſome Relief; becauſe he can turn the Current of the Diſeaſe into another Channel, perhaps, deſign'd for that very Purpoſe. Nor is it a ſmall matter if a Phyſician can change a dangerous Diſtemper into one leſs dangerous; ſo that the Patient, who would otherwiſe die of ſome acute Diſeaſe, may ſtill carry on thoſe morbific Seeds to a more advanced Age, which, perhaps are ſown purpoſely

poſely in us, as fit for the Diſſolution of the Body.

I wiſh this divine Method of Healing, which conſiſts in the Mutation of Diſeaſes, was better known to us all; for I believe it would be much better for the Health of the Patient and the Credit of the Phyſician.

Another remarkable Inſtance of this Method is found in the Cure of Dropſies by the Help of the abſorbing Veſſels. When, for a Seaſon the Diſeaſe is thrown upon the Kidneys, and the Secretion being turn'd off from the Glands of the Peritonæum, the included Water is abſorbed and drained off by the Kidneys; which is often performed by the Help of ſoapy Medicines, and the Uſe of lixivious Salts; and I ſtill remember that the celebrated Profeſſor, Dr. *Boerhaave* told me, he had cured many Dropſies by this Method. But I ſhall ſubjoin a Caſe which I think the moſt remarkable.

I was ſent for to a Countryman's Wife, and aſked if it was proper to draw off the Water by the Paracenteſis, or Tapping. The Surgeon thought there was a vaſt Quantity of Water in the Abdomen; but becauſe the Woman was weak, and at that Time unfit to bear the Operation, we firſt tried the Aſſiſtance of Medicines; and becauſe this Dropſy was cauſed by

obſtructed Kidneys, I gave the following Medicines.

℞ *Of prepared Woodlice two Drams, of Venice Soap half an Ounce, of Gum Ammoniac two Drams, Balſam of Sulphur with Oil of Turpentine enough to make ten Pills of every Dram.*

Of which ſix or eight are to be taken every Day, drinking after them a Draught of the following Wine.

℞ *Salt of Wormwood one Dram, Loaf-ſugar three Drams, Chemical Oil of Nutmegs ſix Drops, White-wine a Pint; mix them and make a medicated Wine.*

After taking theſe Medicines ſhe voided ſixteen Stones of an irregular Shape of about the Size of common Marbles that Boys play with.

When I was ſent for again after ſhe had taken theſe Medicines, the Woman was taken with ſuch a great and continual Flux of Urine, that the Sphincter of the Bladder was overpowered, and the Water flowed out involuntarily, and went through the Bed and the Floor of the Chamber. The Patient was then reſtored by proper Cordials, and bound with proper Bandages, and thus the Dropſy almoſt in a Moment of Time was abſorbed and drained off by the Kidneys.

The Woman lived fifteen Years after, without any Relapſe. This proves what I mentioned

tioned before, that the Secrations may ſometimes be governed by the Will of the Phyſician, and that the Glands will readily ſecrete their Fluids when they are urged by a Stimulus either of Pain or Vellication; which will appear by the following Example. I had a Sheep which tho' ſhe had no Milk, took a Lamb which had loſt its Dam; upon the Lamb's pulling the Teat it drew ſuch a Quantity of Milk, that the Lamb grew fat and ſtrong. The Shepherd poſitively affirming this to be true, I ordered him to bring me the Sheep; (for he mentioned this about Shearing-time) the Dug was very full of Milk, though it was nine Months ſince ſhe had ſuckled a Lamb before. And ſeveral other Shepherds aſſured me the thing was true and not uncommon.

The following Story from *Regner. de Graaf* is to the ſame Purpoſe. *Mr.* Vandeveld, *in whoſe Houſe I lodged at* Delft, *had not long ſince a Bitch that was very fat, out of whoſe Dugs a Cat ſucked ſo much Milk for ſeveral Years that it was almoſt its whole Nouriſhment, and that for many Years, tho' ſhe never had any Puppies, nor was ever pregnant. For the whole Time ſhe was proud they watched her carefully; however, at laſt ſhe happened to grow big with Pup, and from that Time the Cat would ſuck no more.* See *De Graaf* de Vir. Organ. p. 126.

I think it needleſs to illuſtrate this any farther; and upon this Foundation I attempt to cure all recent Tumors and Fluxions upon the tracheal and pulmonary Glands; from whence, very often, *Hippocrates* affirms, Conſumptions ariſe: For, (ſays he) *Others are ſeized with a great Fluxion upon the Throat, from whence there commonly follows a Conſumption; for the Lungs are ſtuffed with Phlegm, which becomes a Pus that corrodes the Lungs, and the Patients do not eaſily recover.* See *Hippocrat.* de Glandul. Sect. 10.

Theſe recent Fluxions are ſucceſsfully cured by this Method, and it ſeldom fails but in Caſes that are grown deſperate by long Continuance.

By the ſame Method alſo I treat recent Tumors of the Glands in the Joints and other Parts, and have ſeldom found the inteſtinal Glands deceive the Hopes of the Phyſician or the Patient. But I do not expect every thing from theſe Means; for I have ſeen ſome cuticular Eruptions ſo obſtinate as to elude all the Force of this Method: But I have conquered many of theſe, (rejecting firſt all Medicines of a ſtimulating Quality, and confining the Patient to Water and a Milk Diet) by thoſe very Medicines which before had no Effect. But when the Veſſels are contracted by ſtimulating Medicines, which allow no Way

to

to carry off the Diſeaſe, there the Patient is moſt conveniently prepared for this Method by warm Baths, drinking Water, and the Uſe of lenient Alteratives, with a Milk Diet.

The larger Glands of the Neck, of the Axillæ, and the like, are more eaſily evacuated than the reſt; but the Glands of the Skin are more troubleſome, and require a longer Time before they can be cleanſed; but thoſe Diſeaſes that are any Species of the Herpes are the moſt obſtinate.

Sometimes I have ſeen the Patient affected with a *Nauſea*, from the topical Remedies uſed in a Relapſe; but ſeldom where purging with *Sea Water* was joined to the other Means; for here this Diſorder is prevented by opening the inteſtinal Glands. And when the Current of the Diſeaſe has been turned this way for a little while, the Evacuation becomes as it were natural, and that Secretion by the Glands of the Skin is not found neceſſary to preſerve the Health of the Patient: But if a Relapſe happens, we muſt have Recourſe to the ſame Helps which ſeem appointed to carry off the Diſeaſe; for unleſs the Paſſages are obſtructed, they are, doubtleſs, deſigned for that Purpoſe. But how well the Glands of the Inteſtines are fitted to receive the Humours transferred from the Skin may be eaſily perceived by the ceaſing of the

Colic upon cutaneous Eruptions; and if theſe Eruptions are repelled, the Colic (and often with a Diarrhœa) returns; for here the Glands of the Inteſtines are affected inſtead of thoſe of the Skin, and the morbific Matter is thrown upon the Bowels, which elſe would break out in Puſtules, or paſs off by Perſpiration. Something like this is found in *Hippocrates*. *But if the Fluxion retreats, and the Phlegm ſhall paſs by the Palate and fall into the Belly, ſuch have a Flux of the Belly, but no Sickneſs.* See *de Gland.* Sect. 9.

Therefore this Way of Cure, which ſeems to follow the Example of Nature, is commonly ſucceſsful if ſkilfully uſed. Moreover I have obſerved, that ſometimes when the Glands have been ſwelled a long Time, and oppreſſed with Humours, and when their Texture hath been weakened by frequent Fluxions, that it is neceſſary not only to procure a more plentiful Evacuation by the inteſtinal Glands, but that there ſhould be alſo a greater Revulſion than can be ſafely made by the Help of Purgatives. And here I found Emetics very uſeful; and when the Glands of the Womb are weaker than the reſt, purging with *Sea-Water*, with repeated Emetics, and bathing in the *Sea-Water*, often ſucceeded to my Wiſh.

But as I think Turpeth Mineral, and other Mineral

Mineral Emetics, too ſtrong for the tender Conſtitution of theſe Patients; I make uſe of Ipecacuanha or Squills; and how uſeful Squills are as an Aperient may be eaſily perceived by their excellent Uſe in Dropſies, and in Diſorders of the Breaſt; and in Diſeaſes of the Glands I eſteem them to be the beſt Emetic among Vegetables; for they make a ſafe and effectual Revulſion; they open the Kidneys, and augment all the Secretions; and the Patient runs no Riſque of a colliquative Diarrhœa, which very often produces a Conſumption. *Gerard* obſerves, that of Squills roaſted with eight Parts of Salt, one Spoonful taken faſting looſens the Belly. And if the Infuſion of Squills is given with ſtrong Cinnamon Water, it ſeldom excits a Vomiting, but ſometimes paſſes off by Stool, and ſometimes by the Kidneys in a copious Stream. And hence its Uſe is ſo juſtly applauded in the Dropſy.

Having taken this Notice of the Virtues of Squills, it will not be improper to obſerve, that the Ancients had almoſt all their Remedies for Diſeaſes of the Glands from the Sea; which I think deſerves Notice, for we muſt naturally ſuppoſe, that their known Virtues were the Cauſe of their being almoſt univerſally uſed; eſpecially as the Practice of the Ancients was not founded upon any particular Hypotheſis,

but rather derived from Experience, that Miſtreſs of all Arts.

As I have mentioned Squills, I hope to be eaſily excuſed if I take a ſlight View of the Remedies of the Ancients; but I would have this firſt taken Notice of, that it would, in my Opinion, be very wrong to deprive this Method of mine of the Aſſiſtance of other Medicines, which all other Methods of Cure claim as their common Right.

For though the *Sea-Water* can do many and very great Things by its own Virtues, yet it is ſometimes aſſiſted by the mutual Operation of other Medicines. But to return: The Medicines moſtly uſed by the Ancients in Diſeaſes of the Glands were prepared from a Calx, or a lixivial Salt. *Pliny* obſerves, that *the Aſhes of Oyſter-ſhells relieve the Inflammation of the* Uvula, *the Swellings of the Glands behind the Ears, Carbuncles, and Hardneſs of the Breaſts.* And indeed the Ancients uſed all Sorts of Sea-ſhells calcined; alſo in the ſame Caſes *burnt Pumice-ſtone, calcined Sponge, burnt Cuttle-fiſh Bone*, &c. And at preſent we find every Sort of Calx uſeful to diſſolve Concretions, and correct the ſcorbutic Taint of the Blood. The Reader will perhaps excuſe me if I relate the Caſe of a certain Patient who was long afflicted with a Cough and Spitting of Blood; but upon taking

ing the *Aqua Benedicta* of Dr. *Bates*, he ſpit up two Stones that were rough and ſoftiſh like Chalk. I imagined this proceeded from the Stones not being intirely diſſolved by that Medicine, which was taken with Milk. But however that might be, he was cured.

There is a Species of *Madrepora*, which the *Americans* burn to Calx, and, with this Remedy, cure the Natives of Swellings of the Glands, if we may believe their own Accounts. And the *Siameſe* have ſuch a great Eſteem for a certain Calx made of Sea-Shells, that they curiouſly temper their famous *Areca* with it, which they are almoſt always chewing. This Mixture is made of a certain Fruit about the Bigneſs of an Acorn, cut in ſmall Pieces, being firſt mixed with the Calx of Sea-Shells. This is wrapt up in the Leaves of Betel. *Bontius* mentions this Medicine in his Book *De Medendi Methodo Indica*. *Beſides this, we have here*, (ſays he) *a peculiar and noble Medicine, which is made of Areca, Betel, and Lime made of burnt Oyſter-ſhells, which being chewed draws Phlegm from the Head, and conſumes the ſame in the Stomach, and prevents its filling the Head with Vapours, from whence thoſe Catarrhs proceed.* See Chap. 12. And afterwards ſays, *For the Deſcription hereof, and the other extraordinary Virtues with which it is certainly endowed*, ſee

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in *Garcia*'s Hiſtory of Spices, Cap. *De Betel. & Arec.* Then alſo writing in the 18th Chapter of an obſtinate Herpes, or Ring-worm, called by the *Indians Courap*, he ſays the following Liniment is uſed ſucceſsfully.

℞ *Of Opium half a Dram, Calx or Quick-Lime, made of burnt Shells two Scruples* [ſo Bontius] *rub them on a Marble Stone with the Juice of Love-Apples. When the Patient uſes it, let him ſcrape off the Cruſt of the Herpes, then wiping off the Ichor, anoint the Part.*

I recite theſe Paſſages to confirm the Uſe of of a Calx with *Sea Water* in Diſeaſes of the Glands.

Moreover, all the Kinds of *Alga*, or Sea-Weed, deterge powerfully, whence they had the Name of Fucus. The beſt for this Purpoſe is the *Quercus Marina*, newly taken out of the Sea. But as I ſhall hereafter give the Uſe of this Plant, with a Deſcription thereof, I ſhall ſay no more of it here. The Ancients mention ſeveral Sorts of *Alga* or Sea-Wreck, as the *Palea Marina*, *Alga Lactucea*, and *Alga Pæniculata Tinctoria*, of which the latter was eſteemed good againſt the Sting of the Scorpion, and was therefore uſed in the Theriaca, as *Nicander* affirms; and even at this Time our Fiſhermen, when they are ſtung by the

Paſtinaca

Paſtinaca marina, or *Sea-Dragon*, and can't get the Liver of the Fiſh, which they reckon a certain Remedy, in this Extremity have preſently Recourſe to Sea-Wreck, and apply it to the Swelling, which aſſwages the Pain of the Wound, and diſperſes the Tumor. We are alſo told by *Garidelius*, that the Inhabitants of *Provence* apply the Sea-Wreck to bruiſed Parts of the Body, which, by its Virtue, diſperſes the Contuſions: And afterwards cites theſe remarkable Words of *Pliny*: *I myſelf knew a Man cured by the Sea-Wreck, who fell from a high Tree as he was lopping it, and broke almoſt all his Bones. He was wrapt all over with it, which was kept conſtantly moiſt with its own Water and was never removed, but when for Neceſſity of Change freſh was applied; and by this Means he recovered perfectly in ſo ſmall a Time that it is almoſt incredible.* See *Pliny*'s Natural Hiſtory, L. 27. Cap. 8.

And tho' I know that *Pliny*'s Authority has very little Weight among the Learned, yet a Diſtinction is to be made between thoſe Things which he relates upon the Teſtimony of others, and what he declares he ſaw with his own Eyes.

But it is ſufficient to my Purpoſe to draw this Inference from hence that the Alga, or Sea-Wreck, was uſed by the Ancients to diſ-

ſolve

ſolve Tumors, to which Teſtimonies concerning Sea-Wreck we may add the Authority of *Dioſcorides*. He takes Notice that Sea-wrecks of every Species are cooling, and particularly uſeful in the Gout and Inflammations, if newly taken out of the Sea.

The Ancients alſo uſed *Alcyonium*, or, as it is called, the *Froth of the Sea*, in the ſame Caſes, of which they deſcribe many Kinds; but *Dioſcorides* affirms that to be the beſt Sort, which is of a red Colour. He ſays it was compoſed of a certain Matter reſembling little Worms, and brought from *Miletus*. The Ancients uſed to calcine this with Salt, and made hereof a certain abſterging Medicine. *Matthiolus* teſtifies he ſaw this at *Venice*. I confeſs, indeed, that I could never find any. Out of theſe Materials various Forms of Preſcriptions are eaſily compoſed: But, after the Example of *Cælius Aurelianus*, I have moſt frequently uſed the following Powder with Succeſs.

℞ *Cuttle fiſh Bone burnt, Pumice-ſtone burnt, Saltpetre and Coralline, of each equal Quantities.*

For Patients that are Children I uſe Coralline chiefly, becauſe of its Excellence in deſtroying Worms. *Matthiolus* teſtifies, that a certain Boy, by this Medicine, voided above an hundred Worms; and *Braſavolus* obſerves that

that Nitre is good for the ſame Purpoſe. *I give a Dram and a half of Nitre in Broth, and it brings away viſcid Matter, and ſometimes dead Worms; for it kills Worms in a wonderful Manner. I have given it, not exceeding a Scruple, to a vaſt Number of young Children, and it deſtroyed all Kinds of Worms.* See *Anton. Muſa, Braſavol. De Medicament. Purgant.* p. 122.

Medicines outwardly applied are often ſucceſsful againſt external Tumors. I have happily uſed a Lotion made of Oil of Tartar *per Deliquium*, mixed with *Sea Water*, when the Glands were almoſt turned to a Scirrhus. But if the Stricture of the Veſſels is to be relaxed, *Pliny*'s Decoction of Frogs in *Sea Water* is vaſtly preferable to the common *Plaſter of Frogs*.

But Nature herſelf ſupplies us with the beſt Medicine for diſſolving Tumors, in the *Quercus Marina*, or Sea-wreck, at one Seaſon of the Year; for in *July* this Plant bears certain Veſicles or Pods that contain a ſlippery and ſoapy Juice. Theſe Veſicles are to be ſqueezed in the Hands, and the Tumor rubbed with them till it imbibes this ſoapy Liquor: And Laſtly, it muſt be waſhed with *Sea Water*, and dried perfectly clean. The following *Fucus*, or Soap, is equally, if not more, powerful for the ſame Purpoſe, which I frequently uſe.

℞ *Of the Veſicles of the* Sea-wreck, *full of their Liquor, gathered in* July, *two Pounds,* Sea-water *two Pounds, let them ſtand together in a Glaſs-Veſſel ten or twelve Days, till it makes a Liquor nearly approaching the Thickneſs of the thinneſt Honey, then ſtrain it, and therewith rub the affected Glands (chiefly when the Tumor is abating) twice or thrice every Day. Afterwards waſh it clean with* Sea-water.

Nothing exceeds this Method in the Decline of the Tumors; for it diſperſes all Hardneſſes.

But all the acid Preſcriptions of Mercury promote a Calloſity, as may be ſeen in the Uſe of the red Precipitate; therefore to diſperſe Scirrhous Tumors, we muſt uſe ſuch *Formulæ*, or Preſcriptions, that ſtimulate the Solids without hardening them. And indeed theſe outward *Formulæ* are therefore beneficial, becauſe they have a diſſolving Power, and fit the Veſſels to ſend back the Humours into the larger Tubes, whereby the Diſorder is reduced to the Laws of Circulation, and is more under the Command of the Phyſician. But all thoſe *Formulæ* are hurtful that promote a Suppuration, and it is our Buſineſs chiefly, either to guard againſt a Pus, or to extirpate the Tumor; for when once a Gland is ſuppurated it fouls the Blood, and in a manner lays the Foundation of other Tumors; therefore great Care is to be taken

taken by the Uſe of *Sea Water* to correct the Tone of the Solids as well as the Taint of the Fluids; and Regard muſt be had to both theſe Intentions jointly; for although *Sea Water* is alone very powerful, yet in Glandular Diſeaſes of the Liver or Kidneys ſaponaceous Medicines are to be given, that by their Aſſiſtance the Stiffneſs of the Fibres may be leſſened; that the Paſſages may become more ſlippery; and that the Stones in the Liver or the Kidneys may find a readier Paſſage upon drinking Salt Water. But if there is the leaſt Cauſe to ſuſpect a *Febricula* or little Fever, or Pus generating in the Bowels, I lay aſide Soap and lixivious Salts, and depend entirely on Bleeding and ſalt Purgatives. *Sea Water* reſiſts Putrefaction, and is not ſo apt to excite Impoſthumes as the Roſinous Purges, as I obſerved before.

Beſides which, *Sea Water* moſt excellently deterges and diſſolves, and alſo draws forth the Humours from the tumified Glands.

Many cure Dropſies with Salt, and remove an old Cough with a Linctus thereof. *Pliny* L. 30. Cap. 9.

Neither were the Ancients ignorant of the Uſes of Salt againſt Putrefaction, for they ordered it to be held under the Tongue, till it was diſſolved, every Morning. They likewiſe

wiſe uſed it to cleanſe the Teeth and Gums, to reſtrain Eroſions and all Putrefaction. And I believe it is an excellent Dentifrice, becauſe amongſt the great Number of Women that get their Living by daily picking up Shells upon the Sea-ſhore, you ſhall ſeldom ſee one with rotten Teeth; on the contrary, their Gums are generally firm, their Lungs ſound and free from any ſcorbutic Cough; and this is chiefly cauſed by the ſaline Particles which are communicated to the Air from the Surface of the Sea; or rather which are daſhed out by the breaking of the Waves, for little or no marine Salt is exhaled by the Heat of the Sun.

It would be unjuſt in me to paſs by the Uſe of this Method in a *Bronchocele* or Swelling of the Fore-part of the Neck, becauſe it is here of great Service. And whilſt I was writing this I received a Letter from my very learned Friend Dr. *Lee*, which confirms this. *Sea-Water* (ſays he) *is of great Benefit in many Kinds of Diſeaſes. This Medicine performs thoſe Effects in ſtrumous and ſcorbutic Caſes, which perhaps you may in vain wiſh for from any other. A* Bronchocele *which was fixed many Years, ſo that the Breathing was greatly affected thereby, either in ſpeaking or moving, was cured by this Remedy. I knew the Leproſy itſelf twice cured by Drinking and Bathing, when the Surface of the Body was*

almoſt

almoſt covered with Spots and Scales; But this you are well acquainted with; and others ſhould underſtand that the ſame Helps agree with all Patients as well as with all Diſtempers, and would certainly agree with them more eaſily and frequently if their Uſe was more accurately obſerved, by Perſons rightly qualified.

When a *Bronchocele* hath continued a long Time it generally contains extravaſated Humours, which muſt be treated by manual Operation.

In the mean Time I perſuade the Patients to ſhave their Heads, and expoſe their Necks to the cold Air, and to rub them with moiſt Sea-wreck, upon the Decline of the Tumours of the *concatenated Glands*, [of the Neck] for nothing, as far as I can judge, does ſo much weaken the Tone of the infirm Parts as the Uſe of warm Cloathing. Indeed the whole Regimen, of Cloaths, Food, Air, and Medicines ſhould be cold, which often prevents a Scirrhus or a Cancer; for the warmer State of the Air makes theſe Diſtempers more common among the *Aſiatics* than in the more Northern Countries. *As to external Cauſes, chuſe a cold and moiſt Air, chiefly cold. Hence Cancers are ſeldom found in* Germany, *but frequently in* Aſia. See *Fabricius ab Aqua Pend.* p. 120.

I have often had Boys brought to me, weak, pale, with long thick Hair hanging down their Necks, and covered up with the greateſt Care, leſt the tender Creatures ſhould be killed with the Cold, the whole Texture of the Body being relaxed with the Heat of their Cloathing, and with nocturnal Sweats. I have ſent them back to their Parents, with their Hair cut off, their Necks bare, with a florid, youthful Countenance, having firſt ſtrengthened their Limbs by bathing in the Sea.

I mention this to perſuade fond Parents not to enervate their Children, that are naturally healthy and ſtrong, by too warm Cloathing in their Infancy.

The *Sea Water* is alſo an excellent Remedy where the Belly is bound; for the Inteſtines being evacuated by its Aſſiſtance, and Crudities carried off, which would elſe oppreſs the morbid Bowels, it gives an eaſier Paſſage to the Gravel and Stones out of the Biliary Duct.

And thus I have faithfully declared, as far as I am able, what may be done, and what cannot be done by *Sea Water*; but where there was the leaſt Cauſe to doubt, there I have been ſilent, or have acknowledged my Ignorance, without impoſing my Conjectures or Fancies upon the Reader. The ſeveral Caſes ſubjoin'd were treated under my own, or by my Friend's

Friend's Inſpection, whoſe Relations I can as much depend on as if I had ſeen them with my own Eyes; and although we do not always meet with the ſame Succeſs, yet I have more Dependance upon this than any other Method.

But as ſome Perſons, perhaps, will be deſirous of knowing how I came firſt to take notice of this Medicine, and upon what Authorities I was induced to apply my Studies to diſcover its Uſe, I ſhall add a few Lines on this Matter.

In the firſt place, I had long ſince obſerved, that the Inhabitants of the Sea-Coaſt made uſe of *Sea Water* in Diſorders of the lower Belly, and chiefly in thoſe proceeding from Worms. I alſo found, that *Dioſcorides* employ'd a whole Chapter in reciting its Virtues; but I found that both he and *Pliny* either had tranſcribed the vulgar Opinions, or elſe knew little of the Power of this Medicine, and but little approved of its Uſe: And I was the more perſuaded of this becauſe I ſaw this Water ſucceſsfully uſed by the Inhabitants of the Sea-Coaſt. And theſe Circumſtances pointed out ſome extraordinary Obſervations of its Virtues, which led the way to theſe diligent Enquiries. Beſides, I had experienced that *Glauber*'s Salt was an excellent Purgative in many cutaneous

Diſ-

Diſorders, and reſolved to try the Effects of *Sea Water* in the like Caſes, and I preſently found it was an excellent Medicine in Diſorders of the cutaneous Glands.

Afterwards in 1730 I read a Book intitled, *The Domeſtick Companion*, which adviſes the Uſe of *Sea Water*, and commends it to Sailors as a moſt convenient Purge. And laſtly, ſome Years ago, having ſome Converſation about this Matter with Mr. *Webb*, who is a very worthy Man, and a ſkilful Surgeon, and who had try'd the Virtue of this Medicine, he preſſed me to try farther, and conſider it more accurately.

And theſe are the Reaſons and Authorities which firſt led me to uſe *Sea Water*, and afterwards confirmed me in the Knowledge of its Virtues. And indeed I have employ'd much Labour, Study and Diligence in this Matter, in repeating various and almoſt infinite Experiments. I think proper to obſerve before I proceed to the Recital of the ſeveral following Caſes, that all the Medicines here preſcribed were procured from the Apothecaries Shops, and that every Caſe is ſelected out of ſeveral of the ſame Kind, leſt a longer Account of Cures ſhould prove tedious to the Reader.

CASE

CASE I.

Of the Glands of the Lungs maturated, with large Tonſils and ſcrophulous Tumors in the Neck, and near the Ears.

I Was ſent for to a Boy twelve Years old, extremely waſted with a Hectic Fever, which proceeded from the Pus retained in the Lungs. He had an almoſt continual Cough, no Spitting, but an extreme Difficulty to walk. His Tonſils were large, his Neck full of ſcrophulous Tumors, two of which, near the Ears, were very hard, and full of Pain.

To ſtop the Progreſs of the Abſceſs, I order'd Veneſection, under which the Boy almoſt fainted; this was followed by violent Fits of Coughing and Vomiting, which broke the Impoſthume, and he threw up a little of the Pus or Matter. I remember the ſame thing happening ſeveral times before; for when the Elaſticity of the Part affected is reſtored by Bleeding, the Pus is preſently ejected. I then gave him what follows:

℞ *Sperma Ceti one Scruple, Salt of Nitre eight Grains, Coralline half a Scruple, Milk-water an Ounce and a half, ſimple Cinnamon-Water half an Ounce, Syrup of Balſam one Dram.*

Dram. Mix it for a Draught, to be taken three times a Day.

℞ *Sperma Ceti one Scruple, prepared Pearls one Scruple, pearl Sugar half a Scruple. Mix them and make a Powder, to be taken Night and Morning in a Spoonful of Aſſes Milk, drinking after it a Draught of the ſame.*

By theſe Means, and by gentle Riding, his Lungs were cleanſed, and the Cauſe being removed, the Hectic Fever ceaſed: But a little Cough remaining, the Patient was removed to *Brighthelmſtone*, a Town near the Sea, that he might be near the Remedy deſigned for the Cure of Obſtructions. Then he firſt took a Purge of *Glauber*'s Salts and Manna, and after purſued this Method.

℞ *Of Æthiops Mineral twenty Grains, of Woodlice eight Grains, precipitated Sulphur ſix Grains, the Pulp of Caſſia Fiſtula, enough to make them into a Bolus; to be taken going to Reſt, drinking half a Pint of* Sea Water *the next Morning.*

℞ *Tincture of Woodlice prepared with Tincture of Salt of Tartar two Ounces. Take a Tea-Spoonful an Hour before Dinner, every Day, in a Draught of* Briſtol Water, *mix'd with a little* Rheniſh Wine.

Theſe

Theſe Medicines gave him three or four Stools a Day, his Appetite returned, he began to improve in Fleſh, the Tumors of his Neck and Tonſils grew leſs. Soon after I ordered his Head to be ſhaved, his Neck to be kept uncovered, and the Tumors to be waſhed daily with the following Lotion;

℞ *Of Oil of Tartar per deliquium half an Ounce,*
Sea Water *one Pound. Mix it for a Lotion.*

And by theſe Means the Tumors were diſperſed by Degrees. Towards the End of their Diſſipation I ordered his Neck and the Parts affected to be rubb'd with *Quercus Marina*, [Sea-wreck,] newly taken out of the Sea, and moiſtened with its native Soap; and thus the Tumors diſappeared intirely. Then continuing to drink *Sea Water* for three Months, I order'd him the Cold Bath. The Boy uſed to ſwim in the Sea with his Companions, and thereby grew ſtronger and better able to endure Labour, and having thus recovered his Health he departed.

I have treated this Cauſe more fully, that it might appear at what Time of the Diſeaſe I uſed to preſcribe *Sea Water*, and to ſhew how convenient it is to uſe this Cathartic ſeveral Months. And it is to be obſerved that the Thirſt which happens at firſt, after drinking the Water, generally goes off by frequent Uſe. This will ſuffice for the treating of the Glands

of the Lungs in a State of Maturation. But it is to be noted, that unleſs the Pus, is firſt thrown up out of the Lungs, the *Sea Water* has very little Effect; and except new Fluxions are prevented by a conſtant drinking it, the weak Parts cannot recover their former State, and the Diſeaſe will neceſſarily be renewed.

CASE II.

Of morbid Glands not ſuppurated.

A Servant of the moſt noble Duke of —— came to me. He had a large Tumor reaching from the Ear to the Collar-Bone, which I ſuſpected to be hereditary, becauſe his Siſter was afflicted in the ſame Manner; but becauſe he had contracted a Hectic Fever by a wrong Uſe of Calomel, I ſent him to *Brighthelmſtone*; then, after Bleeding eight Ounces, I gave him the following Medicines.

℞ *Æthiops Mineral two Ounces, prepared Woodlice two Drams and a half, burnt Sponge two Drams, precipitated Sulphur two Drams, Conſerve of Paronych. ſix Drams, ſolutive Syrup of Roſes, enough to make it into an Electary. The Quantity of a Nutmeg is to be taken Morning and Evening, drinking a Pint of* Sea Water *after the Morning Doſe.*

℞ *Tincture of Sal Tartar ſix Drams, Tincture of Saffron two Drams. Take a Tea-ſpoonful*

ful an Hour before Dinner in a Draught of old Hock.

The concatenated Tumors of the Neck diſappeared; the large Tumor, which was as it were the Root of the reſt, grew leſs; but there remained a certain ſmall Gland without any Pain, which was yet ſo ſmooth and poliſhed that it ſeemed to be a true Scirrhus. But the Patient not conſenting to have it extracted, it began the next Spring to maturate. Then the Impoſthume was opened by Mr. *Mercer*, a Surgeon; the Coat of the Gland was cleanſed; and the Patient grew well, without any new Tumors yet appearing, though there is Danger of a Relapſe.

CASE III.

Of the Tumefaction of the Glands of the Knee.

I Was called to a certain Patient afflicted with a pretty large Tumor upon the Joint of the Knee, which had entirely withſtood the Force of the common Method. His Habit was robuſt and fat; his Pulſe calm, only a ſmall Pain in the Part affected, which could not perform its Offices, becauſe of the Thickneſs of the Joint and the Fluxion, which had continued for eight Months; but even this Perſon was cured by the following Method.

After Bleeding I preſcribed an Emetic of *Ipecacuanha* and *Turpeth Mineral* once a Week, and on the other Days the following Electary with *Sea Water*.

℞ *Of Vegetable Æthiops* [hereafter deſcribed] *three Drams, Cuttle-fiſh Bone burnt three Drams, Coralline half an Ounce, prepared Woodlice two Drams, Conſerve of Paronych. an Ounce and an half, Syrup of the five opening Roots, enough to make an Electary, of which take the Quantity of a Nutmeg twice a Day, drinking a Pint of* Sea Water *next Morning.*

The Part affected was daily anointed with freſh *Unguent. Nutrit.* and as the Tumor grew leſs, he uſed cold Bathing in the Sea, and a ſlight Friction of *Quercus Marina* to ſtrengthen the Part. In this Manner the Tumor was ſubdued, and the Man could walk without any Trouble.

CASE IV.

Of the Tumefaction of the Glands on the Edges of the Eyelids.

THE Inflammation and Soreneſs of the Eyes, which proceed from continual Fluxions on the Glands of the Eyelids, are extremely troubleſome to the Phyſician and Surgeon, whether they proceed from a ſtrumous

or

or ſcorbutic Cauſe. But becauſe all theſe Diſorders in general are cured by this Method, I ſhall only take notice of the moſt difficult Caſes of this Kind, where both theſe Diſorders are united.

I was ſent for to a Man two and forty Years old; he was afflicted with an Inflammation of the Eyes and a Lippitude, from a continual Fluxion upon the Glands of the Eyelids. The Veſſels of the conjunctive Membrane, or the White of the Eye, were ſwelled, ſo that they ſeemed to depend, and had the Appearance of a *Fungus:* The Cornea began to be ulcerated. In this Caſe I ordered Bleeding three or four Times at proper Intervals; Iſſues were opened in the Nape of the Neck, and the following Method was entered upon.

℞ *Æthiops Mineral two Ounces, Vegetable Æthiops three Drams, Woodlice two Drams, red Coral prepared three Drams, Syrup of Violets enough to make an Electary; of which take the Quantity of a Nutmeg Morning and Evening, drinking a Pint of* Sea Water *after the Morning Doſe.*

The Patient was of a ſtrong habit, and his Pulſe quiet; and he bore the daily Evacuation without any Inconvenience. The Fluxion preſently decreaſed, and by the aforeſaid Preſcription he was reſtored to Health. *Lommius* has obſerved, that the ſame Caſes are frequently

relieved by Nature. *A Flux of the Belly is good for thoſe that are affected with a* Lippitude.

At length the Fluxion ceaſing, he rubbed his Temples, Eyelids and Forehead every Day with *Quercus Marina* or Sea Wreck, or waſhed them with cold *Sea Water* for ſome Time after his Recovery, and he hath been free from this Diſeaſe ſeven Years; although before this Cure, upon taking any Cold it was wont to return. I have ſometimes ſeen this Diſeaſe accompanied with an intermitting Fever, which could not be conquered without the Bark; but in the Caſe juſt now mentioned the Bark had little Effect. And there is another now preſent whilſt I am writing, whom I formerly attended; he had a Fungus, that grew outwardly from the upper Eyelid; the lower Eyelid was turned back, and the Eye thereby covered. Afterwards, when the Flux of the Humours was diminiſhed, I perceived the Coats of the Eye were ulcerated, and a *Lippitude* of both Eyelids cauſed by the Excoriation. The Patient was cured by the following Method.

Take away Twelve Ounces of Blood.

℞ *Of calcined Spunge, Cuttle-fiſh Bone prepared, of each half an Ounce, Woodlice prepared three Drams, Æthiops Mineral two Ounces, Conſerve of Paronych. ten Drams, Syrup of Violets, enough to make it into an Electary; of which take the Quantity of a Nutmeg Morning*

ing and Evening, drinking a Pint of Sea Water *after the Morning Doſe of the Electary.*

℞ *Tutty prepared, and Salt Petre, of each two Drams, Mucilage of Quince-ſeeds, enough to make it into a Liniment to anoint the affected Eyelids every Day.*

CASE V.

Of a ſcrophulous Ozæna, *or fetid Ulcer in the Noſtrils, with a Swelling of the upper Lip, and ſcorbutic Eruptions upon the Cheeks.*

A Certain Perſon came to me, who had before tried all that *Mercurius dulcis* and every other Medicine of that kind could effect alone; but the Diſtemper was not at all mitigated hereby, but grew worſe: For beſides the *Ozæna*, certain Tubercles of the worſt Colour began to appear near the Noſe, Cheeks, and upper Lip; the Noſtrils were ſo ſtuffed, and ſo cruſted over, that he could breath only through his Mouth. The Diſtemper was extremely difficult to be conquered, but yielded at laſt to the following Method, wherein I gave *Mercurius dulcis* in ſmall Doſes for ſome Months with *Sea Water*.

℞ *Of* Glauber's *Salt one Ounce, diſſolve it in one Ounce and an half of Milk water; add to the Solution compound Piony-water half an Ounce, Syrup of Violets half an Ounce. Mix*

them for a Draught to be taken in the Morning, with the proper Regimen.

℞ *Of Vegetable Æthiops half an Ounce, prepared Woodlice two Drams, burnt Pumice-ſtone one Dram, Cuttle-fiſh Bone burnt two Drams, Æthiops Mineral two Ounces, Conſerve of Paronych. ten Drams, Syrup of Violets enough to make an Electary. The Quantity of a Nutmeg is to be taken Night and Morning, drinking a Pint of* Sea Water *after the Morning Doſe.*

The Patient grew better daily; but when he was tired of this Electary I perfected his Cure with the following Pills and *Sea Water.*

℞ *Of Camphire half a Dram, Vipers Fleſh two Drams, Scammony ſulphurat. one Dram and a half, Calomel one Dram, Syrup of Buckthorn enough to make them into Pills, ten Pills of every Dram; of which take two every Night; or once in two Nights going to Bed, drinking a Pint of* Sea Water *the next Morning.*

Obſerve, that when the Cure of the Tumors was perfected the Liniment of *Sea Water* and *Quercus marina* was uſed, to ſtrengthen the Parts that were ſtill weak.

CASE

CASE VI.

Of various Foulneſſes of the Skin.

I Was ſent for to a Woman that was troubled with ſcorbutic Eruptions about the Ears and Face, which fouled ſeveral Linen Cloths every Day. The Eruptions were partly covered with a mealy Yellow Cruſt. She had tried many Remedies but ſtill grew worſe: At length ſhe came to live near the Sea, and there took every Morning antiſcorbutic Medicines and the *Sea Water*, and deterged the Skin with *Quercus marina*, taken from the Shore, and by this Method in two Months Time the Woman grew well.

CASE VII.

Of a moiſt Leproſy.

A Woman of an extreme ſcorbutic Habit, had been affected nine or ten Years with a kind of moiſt Leproſy. Many ſkilful Phyſicians had endeavoured to extirpate the Diſeaſe, but with little Succeſs. The foul Humours were tranſmitted plentifully thro' the Skin, and in a manner quite covered it, chiefly on the Face, Head and Neck; beſides which, her Ears ſtood erect by Reaſon of their unuſual ſwelling, ſo that they appeared like the Ears of the Satyrs, as they are fabulouſly deſcribed by

the Poets. Laſtly, her whole Frame was foul and naſty.

I adviſed the Uſe of Antiſcorbutics with *Sea Water*. The Diſtemper was conquer'd by Mr. *Newington*, Surgeon, whoſe Letter I received whilſt I was writing. He commends the good Succeſs of this Method, becauſe, upon taking *Sea Water* only two Months the Woman grew well, and to this Day, (it being now a Year ſince ſhe was cured) ſhe never perceived the leaſt Signs of a Relapſe. The Wife of Mr. *H.* a Sea Captain, was affected in the ſame manner, and cured by the Help of Alteratives and *Sea Water*, as I am aſſured by Mr. *Snaſhall*, Surgeon.

CASE VIII.

Of a dry Leproſy.

A Girl of twelve Years of Age was troubled with a dry Leproſy, the Top of her Head, and her whole Body, was ſprinkled over with white *furfuraceous*, or branny Spots. I gave her the following Medicines.

℞ *Of Calomel ſix Grains, Camphire one Grain, Conſerve of Paronychia, enough to make a Bolus, drinking the following cathartic Draught next Morning.*

℞ *Of the Decoction of Senna two Ounces, Manna three Drams,* Glauber's *Salt two Drams, compound*

compound Piony-water two Drams, ſolutive Syrup of Roſes two Drams; mix for a cathartic Draught.

℞ *Of Vipers Fleſh one Scruple, Camphire one Grain, Conſerve of red Roſes, enough to make a Bolus; to be taken every Night going to Reſt, drinking half a Pint of* Sea Water *the next Morning, when the Calomel Bolus is not to be taken.*

Within fourteen Days the Eruptions began to ſcale off, and this moſt troubleſome Diſtemper, in the ſecond Month, without any other Help, was removed by this Method alone. Which Cure being talked of, another Patient came to me, afflicted with the ſame Diſeaſe, and he was ſoon cured by the ſame Means.

CASE IX.

Of a ſcorbutic Eruption, reſembling a moiſt Leproſy.

J. P. whom I have mentioned before, had formerly had a Diſeaſe of the Venereal Kind, and from the Time of its Cure had been in good Health 'till theſe Eruptions appeared. They were univerſal, and partly incruſtated, and partly moiſt. Firſt they ſeized his Head and Arms, and then the reſt of his Body and Limbs, ſo that he could bear no Cloaths on. He was very poor, and was ſent to St. *Thomas*'s Hoſpital

Hoſpital at *London*, under the Care of a very ſkilful Phyſician. He underwent a Salivation by anointing; but as I obſerved before, he returned hectical and emaciated; the Eruptions were fretted and made worſe by the Salivation. He was cured by the following Method.

℞ *Of vegetable Æthiops three Drams, Flowers of Sulphur half an Ounce, Cuttle-fiſh Bone three Drams, Conſerve of Mallows one Ounce and an half, Syrup of Violets, enough to make an Electary. The Quantity of a Nutmeg is to be taken every Night going to Reſt, drink a Pint of* Sea Water *next Morning.*

It appears very plain that this Diſtemper was not at all venereal, as was thought; becauſe it was not palliated by Mercury, and becauſe I neither preſcribed Mercury nor Æthiops Mineral in the Cure afterwards; it is therefore eaſy to ſee what Power this Method hath in ſcorbutic Diſeaſes, where Mercury fails of Succeſs.

CASE X.

Of a Gonorrhœa.

WHAT I am going to ſay of the Cure of this Diſtemper by *Sea Water*, I do not very confidentiy advance, becauſe I have but ſeldom treated it in this Method; yet I recommend

commend it to the Conſideration of Phyſicians, becauſe I am apt to think that it will hereafter prove a moſt uſeful Remedy in theſe Caſes.

I have given the following Medicines againſt a virulent Gonorrhœa.

℞ *Of Calomel fifteen Grains, Camphire three Grains, Pulp of Caſſia Fiſtula, enough to make a Bolus; to be taken going to Reſt, drinking a Pint of* Sea Water *next Morning.*

Thus the Acrimony was ſoon ſuppreſſed, taking alſo the following Powder two or three times a Day.

℞ *Of Sal Prunel and white Sugar-candy, of each half an Ounce; mix them and take a Dram in half a Pint of Barley-water two or three times a Day.*

Afterwards the Cure was perfected by the Help of Balſam of Capivi and Loaf-ſugar, tho' there ſeemed to be no Occaſion for it, nor do I think it ſo neceſſary after this Method as after the common Way of Cure; for I know no other Benefit ariſing from Salt Water than Purging; and as the Nitre in *Sal Polychreſt* and *Sal Prunella* relieves the Strangury, ſo I think in like manner the Sulphur and Salt contained in *Sea Water* are beneficial; at leaſt the ſaline Purges do not augment the Inflammation, but rather reſtrain it. In the mean time, I confeſs,

I have only treated two or three Caſes of this kind.

CASE XI.

Of the Humoral Rupture.

I Was ſent for to a Perſon who laboured under an Humoral Rupture, which aroſe from the Suppreſſion of a Gonorrhœa; the Patient was cured in the following Method.

Take away twelve Ounces of Blood.

℞ *Ipecacuanha twenty Grains, Turpeth Mineral three Grains, Conſerve of red Roſes enough to make an emetic Bolus, to be taken as Occaſion requires, drinking a Pint of* Sea Water *in the Morning of theſe Days when the Emetic is not taken.*

℞ *Of Bean Flour half a Pound,* Sea Water *two Pounds, boil them to the Conſiſtence of a Poultice; adding towards the End Unguent. Nutrit. three Ounces; make a Poultice to be applied to the Part affected.*

The Tumor ſubſided, without leaving any bad Symptom: But as I obſerved before, theſe Remarks are not ſufficient to eſtabliſh this Practice, the Way is only opened for future Experience.

CASE

CASE XII.

Of the morbid Uterine Glands.

I Lately cured an obſtinate *Fluor Albus* with bathing in the *Sea*, drinking *Sea Water*, and what follows.

Take away ſix Ounces of Blood.

℞ *Ipecacuanha thirty Grains, Carduus Water two Ounces, Oxymel of Squills one Dram. Make an emetic Potion, to be taken as Occaſion requires.*

℞ *Of Spodium half a Dram, the Yolk of an Egg, with enough of the White; ſmall Cinnamon-water, one Ounce and an half, ſtrong Cinnamon-water half an Ounce, white Sugar-candy one Dram. Mix and make a Draught to be taken Morning and Night, drinking a Pint of* Sea Water *once or twice a Week.*

It is to be obſerved, that I uſed to preſcribe purging with *Sea Water*, as often as the Patient can bear it without Inconvenience, eſpecially if the Belly is bound; I ſometimes alſo preſcribe the following Injection.

℞ *Balſam of Copaiba three Drams, diſſolved in a ſufficient Quantity of the Yolk of an Egg;* Sea Water *one Pint. Mix them for an Injection.*

CASE

CASE XIII.

Of a Teneſmus, with Ichorous Stools.

A Certain Woman thirty Years old, laboured under a Suppreſſion of the Menſes. Many Glands were morbid by the long Continuance of the Green Sickneſs; ſhe had œdematous, or white, ſoft and inſenſible Tumors on her Legs and Face; the Glands of the *Rectum* were ſo tumefied as to obſtruct the Paſſage, and ſhe ſuffered moſt grievous Pains in going to Stool; at the ſame time there was a continual Diſcharge of Ichor, or a ſharp, ſanious Humour, with a moſt painful Teneſmus, or a continual Deſire of going to ſtool. The Woman was cured by the following Preſcription, and the Menſes were reſtored, and became regular.

℞ *Precipitated Sulphur ten Grains, Vegetable Æthiops half a Scruple, Sperma Ceti one Scruple. Mix and make a Powder, to be taken Morning and Night, drinking a Pint of* Sea Water *after the Morning Doſe every Day.*

Becauſe in this Caſe the hardened Glands of the *Rectum*, and the foul, ſharp Humour created a Suſpicion of a Cancer, I think this Cure ſufficiently ſhews the Virtues of Salt Water in diſ-

diſcuſſing recent Tumors of the inteſtinal Glands; for the Woman by the Help of it was freed from a very bad State of the Blood, and from many Obſtructions: From whence we may conclude, without Raſhneſs, that the *Sea Water* helps by other Means as well as by Revulſion.

CASE XIV.

Of a fixed ſcorbutic Rheumatiſm, in the Feet and Knees.

THE Captain of a Ship, who was of a full Habit was afflicted many Years with Fits of the Gout, and a ſcorbutic Rheumatiſm, by which the Joints were grown ſtiff, and the Glands diſtended by the long and frequent Fits; his Legs and Thighs were ſo ſwelled with the Scurvy, that he could ſcarcely crawl. I preſcribed him an Electary of Æthiops Mineral, Gum Guaiacum, compound Powder of Arum, *&c.* to be taken daily with *Sea Water*; the Patient by theſe Means recovered, and the Thickneſs of the Joints was diminiſhed; from hence it appears, by what Means *Sea Water* begins the Cure; that is, by opening a new Secretion, and by alleviating the morbid Part.

CASE

CASE XV.

Of the Tumefaction of the Glands in the Neck, with an Ulcer in the Wriſt.

THE Virtue of this Remedy in Ulcers acompanied with any Fluxion, will appear by the following Cure. A certain Perſon had an ulcerated Tumor on the Joint of the Wriſt, and the Glands of his Neck were ſcrophulous; but he recovered by taking an Electary of Æthiops Mineral, and by purging with *Sea Water*. And this Remedy is ſo certain a Cure, that Mr. *Webb*, a Surgeon of *London*, whom I have mentioned in another Place, in a Letter I lately received from him, amongſt other Things writes thus, *But this I affirm from certain Experience, that where the Diſeaſe is ſettled upon the Bones of the Wriſt, or the Ankle, this Method is always ſucceſsful*; and further adds, *That he had ſeen an obſtinate Diſeaſe of the Arm cured by the ſame Method.*

But when the Fluxion is derived from the affected Part, it ſometimes falls upon another; and this happened in the Patient above mentioned; for when he was cured, a large, hard Tumor began to riſe in the inner Part of his Knee, but he was cured by the ſame Medicines as before, though the Tumor was almoſt as hard as a Bone; and I remember almoſt the ſame

ſame Thing happening to another Patient under the Care of Mr. *Mannings*, a Surgeon.

CASE XVI.

A Gentleman of a good Family, came to me by the Advice of the ingenious Mr. *Sainthill*, to try the Effects of *Sea Water*; he had a large Tumor behind the Ear, and ſeveral hardened Glands in his Neck. Before he came to me, he had regularly tried all Mercurial Medicines in vain; but there was ſomething more to be conquer'd, than has been mention'd above; for in this largeſt Tumor there was an Ulcer; I preſcribed Alteratives with *Sea Water*, and an Embrocation with the marine Fucus to diſſolve the Scirrhoſities; in three Months Space the Tumors of the Glands diſappeared, and towards the End by bathing in the Sea, the Patient was reſtored to Health; but as there was an Impoſthume in this Caſe, I ſuſpect a Return of the Diſtemper.

CASE XVII.

MR. *Webb*, a Surgeon in *London*, ſent a young Man to me, the Glands under whoſe Collar-Bone were tumefied, one of which that was moſt ſwell'd was as big as a little Egg; and near it, one of the Tubercles was broke, the Pus being maturated; the eminent Surgeon

before

before mentioned, ordered the Wound to be dreſſed with Lenients; when the Patient had taken *Sea Water* with Alteratives for two Months, he went away cured; bathing in the Sea at the latter End of the Time. There was not the leaſt Tumor remaining, nor any Marks of the Diſeaſe; except that where the Tubercle was broke, there remained a little Hardneſs, which might perhaps hereafter prove the Seat of a new Impoſthume; for I have obſerved, that the Sores of the King's Evil, often return near the old Scars, 'till the Capſula of the Gland is quite eaten away by the Pus, and is cleanſed. The Ancients made the ſame Obſervation; for according to *Celſus*, *The ſtrumous Swellings are apt to return near the former Cicatrices.* L. 5. C. 28. Sect. 7.

CASE XVIII.

Of a dry, furfuraceous or branny Leproſy.

A Certain Perſon came to me with a dry, furfuraceous Leproſy; there were ſeveral Clefts in his Hands, and his Nails were bent, and the Diſeaſe prevailed from the Top of the Fingers to the Wriſts; he had tried many Remedies without Succeſs, and among the reſt *Sea Water*; but by the Help of vegetable Æthiops, Vipers Fleſh, and Antiſcorbutic Juices, the Force of the Diſtemper was broken. Indeed,

deed, many Diſeaſes of the *Serpiginous* Kind will not yield to *Sea Water*, unleſs continued a long Time; but few can reſiſt its whole Strength. However, I ſeldom thoroughly experienced the Power of this Remedy in theſe Caſes, becauſe moſt Patients are tired with the Tedioufneſs of the Cure.

CASE XIX.

ALTHO' certain cutaneous Eruptions before mentioned, are not eaſily cured by *Sea Water*, yet I ſaw one of my Relations cured by this Method. He was troubled with an Herpes of a bad Colour, inclining to be browniſh, which had fixed on his Face all the Winter. Early in the Spring, by Order of my Friend, the celebrated Dr. *Wilmot*, he took an Electary of Antimony, *&c.* twice a Day, and *Sea Water* next Morning; the Power of the Remedy exceeded our Hopes; for the Patient was ſoon reſtored to Health, altho' he had taken Vipers Fleſh, *&c.* the Winter before in vain; indeed from that Time, I ordered him to take alterative Medicines at four in the Afternoon, and going to reſt, becauſe they ought to be allowed to exert their Virtues before they are diſcharged by Cathartics.

This Cure was performed under the Inſpection of my worthy Friend Dr. *Lewis*, of *Chriſt-Church*

Church College, Oxon, who is well ſkill'd in Phyſic, to whom, and the moſt friendly Gentleman *Jeremiah Markland* (who quitted better Studies for ſome Time to correct this Work) I have the higheſt Obligation, and return the greateſt Thanks.

CASE XX.

A GIRL living at *London*, about fourteen Years of Age, was troubled with harden'd Glands in the Neck and Arm-pit, with an Impoſthume in both Places; having taken Calomel for ſome Time, ſhe was attack'd with a hectic Fever and a Cough; ſhe came into the Country, and changing her Medicine, ſhe took Æthiops Mineral, *&c.* with Lime-water and Sea-water, at proper Intervals; in the Space of two Months the Cough, the hectic Fever, and the ulcerated Glands, were cured, and ſhe returned to *London* fatter, and of freſher Complexion.

CASE XXI.

THERE is brought to me, while I am now writing, a recent and moſt melancholy Caſe of the *Rectum* or ſtrait Gut, and of the lower Belly, with morbid Glands, which occaſioned a baſtard Iliac Paſſion in a Woman I had ſeen a little before; they thought ſhe was

big

big with Child, when ſhe only laboured under a Suppreſſion of the Menſes for about ten Months; upon examining the Abdomen, it ſeemed to me to be compoſed of a certain Collection of morbid Glands, which by the Afflux of Humours, during ten Months, was grown to that Bulk, that it ſhut up the Paſſage of the *Rectum* ſo that there was no Vent for the Excrements but by vomiting. But I have ſubjoin'd the Deſcription of Mr. *Maynard* the Surgeon, who ſaw her dead (*December* 13, 1748.) The Woman, ſays he, died the *Thurſday* after you ſaw her; I inſpected her after her Death, and cut out the Tumor of the Glands, which was ſix Inches long, and about ten or twelve in Circumference; it weighed almoſt three Pounds. There was alſo, another Tumor larger than the other, by which the Paſſage of the Rectum was ſo obſtructed, that it was impoſſible there ſhould be any Thing excreted. I ſaw alſo another Caſe of the ſame Nature in a Man, in whom the Paſſage of the *Rectum* was ſo ſhut up, that a ſmall Candle could not be thruſt upwards above three Inches; nothing paſſed by Stool for the Space of forty Days; we ſent to *London* for Advice in this Caſe, and Quickſilver was preſcribed, of which he took altogether, three Pounds; in the mean time nothing paſſed by Stool but the Quickſilver, every Thing alſo came upwards; during all that Time,

Time, he had no Fever; at length, the Lungs began to be inflamed, and the Inflammation occaſioned his Death.

CASE XXII.

Of excoriated Breaſts.

THE Menſes failed a certain Woman of a very full Habit, almoſt forty-nine Years old, the Spring after this Suppreſſion, a Flux of Humours fell upon her Breaſts, which was ſo copious and ſharp, that they were both excoriated; but there was no Hardneſs of the Breaſts, though they were of an unuſual Bigneſs; the Glands of the Skin were grievouſly affected, and there was a Tubercle, ſomething hard, of an inauſpicious Colour, upon the left Collar-bone.

Although theſe Signs portended little Good, yet I undertook to remove the Fluxion with *Sea Water*, and entered upon this Work in the following Manner.

Take away ſixteen Ounces of Blood directly.

℞ *Of* Glauber's *Salt one Ounce, diſſolved in Milk-Water one Ounce and a half; compound Piony-Water, half an Ounce, Syrup of Violets, half an Ounce; mix them for a purging Draught, to be taken in the Morning.*

℞ *Of Æthiops Mineral, two Ounces; Woodlice pre-*

prepared, two Drams; burnt Sponge, two Drams; Conſerve of Paronychia, ten Drams; Syrup of Violets, enough to make an Electary, of which take the Quantity of a Nutmeg, Morning and Evening, drinking a Pint of Sea Water *early in the Morning every Day.*

We took Care to have the excoriated Parts anointed, with a Feather dipt in Unguentum Nutrit. and applied Dr. *Turner*'s Cerate of Lapis Calaminaris between the Breaſts, to prevent the ſpreading of the Excoriation.

By theſe Means the Flux which gave Signs at firſt of being very difficult to cure, was ſtopt in leſs than two Months; the natural Shape of the Breaſts was reſtored; nor was there one cutaneous Gland which appear'd to be hard. The Tubercle of a bad Colour mentioned above, which was plainly of a cancerous Kind, as far as I could ſee was neither better nor worſe; but continued for ſeveral Years with little or no Alteration.

CASE XXIII.

Of a hectic Fever proceeding from Pus retained in the Lungs.

A GIRL about twelve Years old came to me afflicted with a hectic Fever and a hard and weak Cough; her Belly was tenſe and hard; her Urine of a whitiſh Colour,

whence her Parents judged her Illneſs proceeded from Worms; therefore, before ſhe came to me, they had given her Æthiops Mineral, Calomel and Hellebore, and earneſtly entreated me to agree to the Method of *Sea Water*, but I judged that the Child's Health was impaired by the Pus detained both in the Lungs and Meſentery; becauſe, I obſerved ſome Glands in her Neck, tumefied with a Kind of Knots; and alſo, that the Fever was attended with frequent Fits of ſhivering; ſo that there was little Cauſe to expect any Relief from Phyſic, the *Pus being already generated.*

At length being doubtful, I yielded to the Uſe of *Sea Water*, which preſently purged her without much Trouble, but without any Appearance of Amendment; for the hectic Heat, and the other Symptoms (as I ſuſpected) grew worſe. Fearing they might be heightened by this Method of Cure, I forbid her the Uſe of *Sea Water.*

Continuing much in the ſame State, ſhe ſoon after went to *London*, but by the Advice of the Phyſician ſhe conſulted, ſhe returned as ſoon as poſſible into the Country, where ſhe died about two Months after; at which Time I was called, for the Sake of inſpecting the Cauſe and Origin of the Diſeaſe.

The

The whole Lungs were beſet with ſmall maturated Glands, and appeared much like the Lungs of the meaſly Sow before mentioned, but the larger Branches of the Windpipe were yet free from *Pus*, whence no purulent Spitting accompanied this Diſeaſe; I found the Liver whole and ſound, but the Meſentery was ſprinkled with morbid Glands, of which ſeveral were maturated.

I was willing to add this Caſe to the reſt, to ſhew, that there is little Help to be expected from this or any other Method, when the Patient is reduced to theſe Extremities. I ſaid before, that the larger Branches of the Windpipe were free from Pus; for I ſaw, that the glandular Tumors aroſe from the Glands ſituated in the ſmall Branches of the Windpipe; for wherever the Branches of the Aſpera Arteria or Windpipe, grew ſo ſmall as not to be ſeen by the naked Eye, there I found them always interſected by a Globule of purulent Matter. But in theſe Diſeaſes of the Meſentery, the Glands are uſually vitiated before any Attempts are made towards a Cure; wherein, if there happens alſo to be an Impoſthume, all Hopes of Relief are vain, which might otherwiſe have been expected from the Aſſiſtance of Phyſician.

As Dr. *Sydenham* was not throughly acquainted with the real Cauſe of theſe Diſtem-

pers, he is miſtaken in attributing theſe Tumors in ricketty Children to the repeated Uſe of Purgatives; for, if he had carefully examined the concatenated Glands of the Neck, I make no Doubt, but he would there have found plain Arguments to believe, that thoſe Tumors generally exiſted before the Uſe of Purgatives.

CASE XXIV.

Of a Colic with a Conſtipation of the Belly.

I Was ſent for to a poor Fiſherman, who was troubled with a very painful Colic, his Belly being alſo bound. I preſcribed as follows:

Take away eight Ounces of Blood.

℞ *Flowers of Camomile, one Handful, boil them in a Pint and half of* Sea Water *to a Pint, and ſtrain it for a Clyſter, to be given immediately.*

I perſuaded him after the Clyſter, to take a Draught every four Hours made with Oil of Sweet Almonds and Manna, till he had a Stool; but as I heard afterwards, the Draught was omitted, becauſe the Patient found the Clyſter alone had a ſufficient Operation.

CASE

CASE XXV.

Of a Jaundice.

A Lady had been afflicted above a Year with the Jaundice, and with frequent Fits of a very violent Colic from the ſame Cauſe; ſhe went to *London* to conſult the ingenious Dr. *Lee* in this Caſe; ſhe returned from the Town, the Violence of the Diſeaſe being nothing abated, for her Urine was almoſt black, and her whole Skin was of a livid Complexion. She had carefully tried every Medicine uſually preſcribed in theſe Caſes; at length, by my Advice, ſhe came into the Neighbourhood of the Sea, that ſhe might join the Uſe of *Sea Water* with *Venice* Soap.

℞ *Venice Soap, three Scruples; Salt of Hartſhorn, ſix Grains; Syrup of the five opening Roots, enough to make a Bolus, to be taken two or three Times a Day, drinking a Pint of* Sea Water *every Day early in the Morning.*

Thus the Paſſage of the Belly was kept open; the Colic very ſeldom diſturbed the Patient, and the natural Colour of the Urine returned; ſhe was remarkably relieved in a moſt obſtinate Diſtemper, and at length reſtored to Health.

CASE XXVI.

I Remember a Caſe not unlike the Fifth, that was under the Care of my honoured Friend the celebrated Sir *Edward Hulſe*, Bart. A Girl eleven Years old, had her Upper-Lip and Noſtrils ſwelled; but upon taking *Sea Water*, the Tumor diſappeared; the Diſeaſe returning next Spring, ſhe went to conſult Dr. *Hulſe*, who adviſed her to repeat the Uſe of *Sea Water*, and preſcribed the following Medicines, which ſhe took in Whey while ſhe continued in *London*, and afterwards in *Sea Water* at *Brighthelmſtone*.

℞ *Burnt Sponge, one Scruple; Rhubarb, four Grains; mix and make a Powder to be taken Morning and Evening, drinking after it a Draught of Whey, ſweetened with Syrup of Violets.*

And this was all ſhe took with *Sea Water*, and which were repeated the ſecond Spring after the Cure was undertaken; thus by their Aſſiſtance, we always ſuppreſſed the Tumors, till about the thirteenth Year of her Age, ſhe had the uſual monthly Evacuation; and from that Time, ſhe has never been troubled with the *Ozæna*, to my Knowledge; nor with the Tumor of the Lip.

CASE

CASE XXVII.

Of a dry Leproſy.

MR. ——— Captain of a Ship, a few Years paſt, was ſent to me by my Friend the ingenious Dr. *Oldfield*, who had uſed his utmoſt Skill to conquer the growing Diſeaſe by the Help of Mercurials; but theſe Medicines proved of little Uſe, a dry Leproſy poſſeſſed both Arms as high as the Elbows, and almoſt an innumerable Quantity of leprous, yellow, furfuraceous or branny Spots appeared all over his Body; all which I took off in leſs than two Months, except one Spot ſtill remaining upon one of his Arms, when the Ship went to Sea; but I know not what happened to him afterwards. I preſcribed thus:

℞ *Æthiops Mineral, an Ounce and half; Antimony perfectly levigated, half an Ounce; Cuttleſiſh-Bone, three Drams; Woodlice prepared two Drams; Conſerve of Paronychia, ten Drams; Syrup of Violets enough to make an Electary, of which take the Quantity of a Nutmeg twice a Day, drinking a Pint of* Sea Water *every Morning early.*

I judge this Cure to be doubtful; becauſe, I have often obſerved this Diſtemper return, 'till the Glands of the Skin had recovered their

Powers, or till the whole Habit of the Body is changed by *Sea Water*.

CASE XXVIII.

Of cutaneous Eruptions, with the Menſes ſuppreſſed.

A Young Woman unmarried complained of Eruptions upon both her Legs, which uſed to riſe every Month in a Swelling, and ſpread wider in the Manner of an Eryſipelas, till upon the burſting of the little Veſicles, or Bliſters, there followed a great Flux of a ſerous or watry Humour.

This Diſeaſe appeared in the twenty-ſecond Year of her Age: Before that Time her Menſes were regular, but they ceaſed entirely afterwards. I attempted the Cure in the following Manner.

Take away ten Ounces of Blood.

℞ *Ipecacuanha, twenty Grains; Turpeth Mineral, three Grains; Conſerve of Roſes enough to make an Emetic Bolus, to be taken once a Week.*

℞ *Vegetable Æthiops, ſix Drams; Woodlice prepared, two Drams; Cuttleſiſh-Bone burnt, two Drams; red Coral prepared, three Drams; Conſerve of Paronychia, ten Drams; Syrup of Violets enough to make an Electary: the*

the Quantity of a Nutmeg is to be taken twice a Day, drinking a Pint of Sea Water *early every Morning.*

By this Method, the true Period of the Menſes was reſtored; but the Fluxion on her Legs continued violently, and the Valvulæ of the Veins were ſo *varicoſe* (ſwelling ready to burſt) that frequently before the Eruption of the Menſes, a new Flux of Humours uſed to invade her Legs. At laſt, I adviſed her to bathe in the Sea, and uſe proper Bandages upon the affected Parts; ſhe went out of my Neighbourhood, and I know not what happened to her afterwards; but I thought proper to inſert this Caſe, chiefly becauſe I have obſerved as in this Woman, ſo in many others, that the Menſes flowed after the Uſe of Vegetable Æthiops and *Sea Water*; and eſpecially whenever I preſcribed ſmall Doſes of *Mercurius Dulcis*, to be taken over Night before the Morning's Draught of *Sea Water*.

CASE XXIX.

Of an Eryſipelatous Criſis.

AS I chiefly intended this Work to illuſtrate that Method in which the glandular Secretions may be directed by the *Sea Water*; I have ſcarce taken any Notice of the Uſe

of this Remedy in certain chronic Diſeaſes of the moſt ſtubborn Kind, but have confined my Remarks within the Bounds which I had preſcribed to myſelf; paſſing over in Silence ſome extraordinary Inſtances of this Matter (that is, of the great Efficacy of *Sea Water* in Chronic Diſeaſes.) But in theſe Diſtempers, we are principally to remember and obſerve in them all, at all Times, that if there are any Separations made of the Humours from the Blood, which have fallen upon any Part for a long Time; theſe Humours muſt be ſuffered to cleanſe and diſcharge themſelves by the old and uſual Way (if it may be done without any great Inconvenience;) but if it is neceſſary to make ſome Change, and draw off the Humours another Way, we muſt remember, that ſome new Evacuation muſt firſt be effected; for if it is true, which I often mentioned, and have before endeavoured to demonſtrate, *viz.* that the Phyſician has a certain Power and Authority in reſtraining and directing Nature, it follows, that wherever he ſees her going wrong, and forming a Criſis by the moſt dangerous Way, he ſhould take upon himſelf the Government of the Criſis, and direct it in a ſafer Way.

And nothing, in my Opinion, will procure more Honour to the Phyſician, than if he follows Nature as a Guide and Teacher, and obſerves,

ſerves, with the greateſt Care and Judgment, all her Motions and Changes; and whenever he finds her going wrong, properly exerts his Power of directing and reſtraining Nature; and takes, as it were, the Reins in his Hands, of the exacerbeſcent Diſeaſe, and rules by his Judgment the important and hazardous Moment of the approaching Criſis, ſince upon this depends the Life or Death of the Patient.

If I judge right in theſe Things, how great Praiſe is due to the Art of Phyſic, and how much Glory and almoſt Worſhip ſhould be given to this Method, upon which, as on a Hinge, the whole Succeſs turns. I ſhall ſubjoin a very remarkable and recent Inſtance of this Matter.

A certain Perſon as remarkable for the Sweetneſs of his Manners as for his Love of Learning, was ſeized with an Eryſipelatous Quincy; the Glands of the Uvula, the Throat and Tonſils, were inflamed, and extremely red; there was a Tumor about the Larynx, or Top of the Windpipe, and thence a Hoarſeneſs; his Reſpiration was difficult and quick, which would not ſuffer him to lie down, his Pulſe very quick and ſtrong.

In this Diſeaſe, Nature ſeemed to me to be endeavouring at an internal Criſis, which, if it had broken out in the Glands of the *Trachea* or Windpipe lower down, it would have been

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a Wonder if the Patient had eſcaped Death; becauſe, in this Extremity, if I had left the Diſeaſe to the Direction of Nature, an internal and fatal Criſis would certainly have enſued; therefore, I uſed the utmoſt Endeavours to turn the Diſeaſe another Way. *Firſt*, I ordered Bleeding, to the Quantity of fifty Ounces at proper Intervals, and a daily Purge of Glauber's Salt; the internal Fluxion was ſoon ſuppreſſed, the Reſpiration was leſs quick and difficult; nor were the Glands ſo red, nor the Tumor of the Tonſils ſo troubleſome; but the Fever, though ſomething abated, was not entirely ceaſed.

Then I firſt perceived a certain red, eryſipelatous Spot appearing on one Side of the Noſtrils; afterwards, other Spots ſpread on the Forehead, Cheeks, Face, and the whole Head. At the ſame Time his Eyes were almoſt hid by the Greatneſs of the Swelling, and the Patient was reſtleſs and uneaſy at my ordering ſo few Medicines, but when the Danger was over that I mentioned in the firſt Part of the Caſe, and there was no Delirium, and the Fever was much abated, I judged it beſt to leave the Diſeaſe to the Strength of Nature; therefore, uſing no Medicines till the Swelling ſubſided, except a few cooling Purges, I recovered the Patient; and this Example will, I think, ſhew, the

great

great Conſequence of a due Direction of the glandular Secretions.

CASE XXX.

Of a moiſt Leproſy.

A Gentleman came to me complaining greatly of a moiſt Leproſy, which was grown to ſuch a Height, that it uſed to emit little Drops of a Humour like little Tears upon the ſlighteſt Touch of the Finger. It was accompanied with ſuch a violent Itching, and ſo troubleſome, that the Patient could ſcarce get any Reſt Night or Day. The Diſtemper ſpread downwards from the Groins over the Inſide of both the Thighs; and on both Sides of the Neck; from the Ears down to the Collar-Bones, and alſo on the Bend of both Arms. The Diſeaſe was of long Standing and deeply rooted, ſo that although the troubleſome Itching ceaſed, and the Fluxion was ſtopt by the Uſe of *Sea Water*, and the Parts affected began to cool and grow dry; yet the evacuating Tubes of the Glands were ſo enlarged, and the Tone of the cutaneous Glands ſo broke and weakened, that the Diſtillation of the Humours returned, after the Patient left off *Sea Water*, and flowed like a ſimple Gonorrhœa; but tho' not ſo copiouſly as before, and without any

any Itching; yet thro' the Debility of the Glands it continued ſome Time.

I perſuaded him to take Lime-Water, and the antiphthiſic Tincture of *Etmuller*, or in their Stead, for the Sake of Variety, Medicines conſiſting of *Vitriolics*, and the *Peruvian Bark*; but how theſe Medicines operated, I cannot tell, as it is now a long Time ſince I heard of the Patient; but this I am ſure of, that in ſome Diſeaſes where the Glands are greatly weakened, that no Remedy can give Relief.

Sometimes the internal Uſe of Tar may perhaps ſhut up the open Mouths of the Glands, but this is not to be reckoned a laſting Cure; although in ſome of theſe Caſes where the Glands are affected with a Diſtillation of Humours, I judge Tar-Water may be beneficial, becauſe this Medicine has a digeſtive Quality like Turpentine, and helps to cloſe the open Mouths of the Veſſels; but, I confeſs, I have had very little Experience of its inward Uſe; but I often uſed to apply an Ointment of Tar outwardly with good Succeſs; I ſubjoin the beſt Form hereof, which I have often given, with a happy Event, after I had tried all others in vain.

℞ *Of Sheeps Suet and Tar, equal Quantity ſix Ounces; Powder of Elecampane Root two Drams; the inner Bark of Elder, half an Hand-*

Handful; let them boil together till the Elder Bark grows criſp, then ſtrain it.

The affected Parts are to be anointed herewith, rubbing it in before the Fire Morning and Evening, every Day till the Eruptions are cured.

CASE XXXI.

Of a ſcrophulous Caries for Rottenneſs of the Inner-Bone of the Ankle.

JAnuary, 1748, there came to me the Beginning of this Year, a young Man, eighteen Years old, Brother to him mentioned in the Letter to Dr. *Lewis*; he laboured under an hereditary King's-Evil; his Pulſe was quick, and his Habit hectical, he not only had ſeveral hardiſh Tumors in the Glands of the Neck, but alſo an Abſceſs on the inner Bone of the Ankle, the Heads of the Bones were ſwelled, and the Joint much larger than it ſhould be; firſt of all, the Pus was let out by a Surgeon; and againſt his other Complaints, I preſcribed as follows:

℞ *Of Vegetable Æthiops, ſix Drams; burnt Sponge, three Drams; Woodlice prepared, two Drams; Æthiops mineral two Ounces; Cuttleſiſh-Bone burnt, two Drams, Conſerve of Paronychia, ten Drams; Crabs Eyes, three Drams; Coralline prepared, two Drams;*

Syrup

Syrup of Violets enough to make an Electary, of which take the Quantity of a Nutmeg at Four in the Afternoon, and at going to Reſt, drinking a Pint of Sea Water *next Morning.*

The young Man came to me about the Beginning of March, to ſhew me the Exfoliation of the Bone; the Ulcer was entirely healed, the Joint and Heads of the Bones were reſtored to their natural Shape; and the Tumors of the Glands of his Neck were diſperſed by the Method before preſcribed.

CASE XXXII.

Of a large ſcrophulous Tumor, reaching from the Ear to the Collar-Bone.

ALtho' I mentioned an Example of this Kind before, yet as this Patient took *Sea Water* ſeveral Months, I was willing to inſert the Caſe, that it might be a Confutation of thoſe Perſons, if there are any ſuch, who condemn the long Uſe of *Sea Water*, as being too ſtrong a Medicine.

In the mean Time, I do not offer to thoſe who cultivate the Art of Phyſic, a trifling worthleſs Remedy, but one that is of great Value and Efficacy, and doubtleſs very ſafe, if it is directed by the Judgment of a ſkilful Perſon; for ſome Objections may be made againſt other Medicines, eſpecially thoſe which undoubtedly

doubtedly poſſeſs ſome extraordinary Virtues, ſuch as, *Mercurius dulcis*, *Peruvian Bark*, *Opium* and *Steel*, all which may do good or harm, according as they are managed; but theſe Medicines are not for this Reaſon to be entirely laid aſide, becauſe they may be wrongly uſed by ſome Perſons; nor will the Raſhneſs of the Ignorant, deter the ſkilful Phyſician from uſing thoſe Remedies in Diſeaſes that require them; but to return.

The Woman in the preſent Caſe, took twenty-five Gallons of *Sea Water*, not at ſtated Intervals, but in one continued Courſe of purging, at a Pint every Morning (which makes in all 200 Pints) and while ſhe was drinking it, ſhe had her monthly Periods more regular and better coloured; a keener Appetite, and the ſtrumous Swellings were diſperſed; but if this vaſt Quantity of *Sea Water* drank, (which was followed by the Cure of the ſtrumous Swellings, and a better State of Health than before) does not procure and demonſtrate its harmleſs Virtues; I fear there will never be any Argument ſtrong enough to remove the unjuſt Prejudices of ſome People *.

CASE

* In the Voyage of *W. Schouten* round the World, the Author ſpeaking of the Inhabitants of an Iſland in the *South Sea*, has theſe Words. "Nous vîmes qu'ils be-"voient de l'Eau marine & en donnoient auſſi à leur pe-"tits Enfans; choſe que nous ſembloit contre nature." That is, We obſerved that the Inhabitants of this Iſland drank *Sea Water*, and likewiſe gave it to their children; a practice which ſeem'd to us contrary to Nature. This will

CASE XXXIII.

Of the Shingles.

THERE is a very common Species of the Eryſipelas, which is called by the *Greeks Zoſter*, by the *Romans Zona*, and in our Country, the *Shingles*; which Diſtemper infeſts the Trunk of the Body, ſometimes attacking the Breaſt, ſometimes the Shoulders, and ſometimes the Sides and Ribs; it often appears lower, and encompaſſes the whole Body like a Girdle; it is attended with little Bliſters or Veſicles, ſometimes yellowiſh, but oftner of a livid Colour, which are of a corroding Nature like the Herpes, or Ringworm, which Species it greatly reſembles.

Marcellus takes Notice of this Diſtemper in the 11th Chapter. *This Medicine*, ſays he, *is good for Carbuncles, and St.* Anthony's *Fire, and for the* Zona (Shingles) *which the* Greeks *call* Herpes. Scribonius *ſays alſo*, Chap. 100. *All the before mentioned Things are good for the* Zona, *which the* Greeks *call* Herpes, *eſpecially green Hemlock well pounded and laid on.*

will ſerve to confirm what the Author has aſſerted concerning the harmleſs Qualities of Sea Water. However I believe it is the only Inſtance we have of its being drank in this manner. It is to be found in p. 112 of the *Paris Edition* in 1618.

But

But this Diſtemper always ſeemed to me, to be a Kind of Scorbutic Eryſipelas or St. *Anthony*'s Fire inclining to a Ringworm by a degenerate Mutation.

Therefore, I treat it by a Method ſomething different from that of the true Eryſipelas; and have obſerved ſome very troubleſome Accidents happen from a too haſty repelling the Eruption; I find alſo the vulgar Opinion, that it is mortal if it goes quite round the Body, was received by the Ancients; for *Pliny* ſays, there are many Kinds of the St. *Anthony*'s Fire, and of theſe that which encompaſſes the Waiſt, which is called *Zoſter*, and kills if it goes quite round the Body like a Girdle, *L.* 26. C. 11.

Nevertheleſs this Event of the Diſtemper is not always true; but in curing this Species of the *Eryſipelas* two Things are chiefly to be obſerved; one is, that we ſhould forward the Maturation of the little Ulcers; the other, that we ſhould forbear Purging till the Eruption is evacuated by the Skin, then indeed the Belly is to be looſened by *Glauber*'s Salt, or *Sea Water*. But I chuſe to add a Caſe of this Diſtemper.

A Gentleman about fifty was ſeized with a Scorbutic Eryſipelas, or rather with a Kind of degenerate Ringworm. The Eruptions covered the Cheſt and the Space under the right Nipple;

Nipple; the Heads of the Puſtules were of a livid Colour; he ſuffered great Pain, and had a ſlight Fever: But when the Puſtules had continued about three Days, and new ones appeared, a Surgeon thought fit to apply a Cerat to the Eruptions, which, inſtead of forwarding the Maturation, only encreaſed the Pain, and they emitted nothing but thin Ichor, and that in ſmall Quantity. At laſt the greateſt Part of the Eruption diſappeared, and the Patient was waked out of his Sleep by a ſudden Fit of an Aſthma, which was very near killing him. Immediately a Surgeon was ſent for who liv'd in the Neighbourhood, who bled him. After Bleeding the Fit of the Aſthma was a little mitigated, but return'd ſoon after, when the Patient was aſleep, with a very violent Attack; then I was ſent for and found the Patient ſomething eaſier, having left his Bed; but even then he complained of a great Pain and Tenderneſs of the little Ulcers that could not bear being touch'd. Upon inſpecting them, I found the little Bliſters were ſunk and turn'd of a livid Colour, containing a ſharp Ichor. The little Bliſters were preſently cut, and cured by red Precipitate with *Unguent. Aur.* apply'd with Cerate to keep them from moving; and I ordered a Julep with *Gaſcoign*'s Powder to be taken when he was faint, or had a Sickneſs of the Stomach. Further, a pretty large Bliſter-

ing

ing Plaſter was applied at Night, but waking as before with a *Dyſpnæa*, or a Difficulty of Breathing, the Patient was obliged to get up.

The next Day we found the Bliſter had drawn plentifully, ſo that from that Time he had no freſh Attack of the *Dyſpnæa*, and the Pain was not ſo violent; the Eruptions alſo began to tend towards Maturation. Then he was purg'd with Manna and *Glauber*'s Salt, and took afterwards an Electary of Æthiops Mineral and compound Powder of Arum, *&c.* purging every other, or every third Day with *Sea Water*.

By theſe Means the Patient grew well without any Return of the Aſthma, and only complain'd of a little of a Tenderneſs, that would not bear touching, in the Parts lately affected by the Diſtemper, which I obſerv'd generally happens in moſt of theſe Diſtempers; but I uſed to cure this Tenderneſs by the following Embrocation, and by the Uſe of Antiſcorbutics.

℞ *Of Camphire one Dram, Spirits of Garden Scurvy-Graſs half a Pint; mix for an Embrocation.*

The affected Parts are to be fomented and rubb'd Night and Morning, with a Sponge wetted in this Embrocaiion; and the Belly is to be kept open with the following Electary.

Of

℞ *Of Æthiops mineral two Ounces, compound Powder of Arum three Drams, Crabs Eyes and prepared Coral, of each two Drams, Syrup of Violets, enough to make an Electary. The Quantity of a Nutmeg is to be taken Morning and Evening, drinking a Pint of* Sea Water *every other Morning.*

But it muſt be obſerved before I finiſh this Caſe, that the moſt convenient Time for Purgatives is generally when the Heat, Thirſt and Reſtleſneſs are abated, which ſeldom happens till after the Eruptions are maturated. But as theſe Eruptions are critical, they are accompanied with more Danger if they ſtrike inwards, than thoſe Diſeaſes of the Skin which are not attended with a Fever.

Laſtly, Obſerve, that if the Diſeaſe encircles the Waiſt like a Girdle, then it is to be treated like the Caſe now mentioned. When I found any very bad Symptoms, where the Diſeaſe poſſeſſed the Cheſt, or any other upper Parts of the Body, I took my Meaſures according to the Parts affected.

CASE XXXIV.

A Man forty-four Years old, was troubled with hard ſcrophulous Tumors upon both Knees, and the ſame ſcorbutic Diſorder upon his right Wriſt: In this Extremity he had

had recourſe to Salivation, but without any Benefit. At laſt he came to me, and by my Advice went to *Brighthelmſtone*, where, for four Months, without any Intermiſſion he drank a Pint of *Sea Water* every Morning.

When the Tumors began to decline he went into the Sea as a Cold Bath, and went away reſtor'd to his Health; but there remain'd in one of his Knees an *Anchyloſis*, or Stiffneſs of the Joint, which was form'd before he came to me; and was the Cauſe of his walking with great Difficulty, leaning upon two Canes. But before he went *away* the Knee that was ſo ſtiff began to be a little flexible, inſomuch that he could walk with the Help of one Cane only.

CASE XXXV.

—SCorbutic Eruptions, which ſeem'd to be a Kind of moiſt Leproſy ſpread all over the Body, and wherever the Cloaths touch'd the Skin they ſtuck ſo cloſe, that upon being pulled off the Blood follow'd in ſeveral Places. There was room to ſuſpect this Caſe was not free from a Venereal Taint; and therefore the Patient had try'd Salivation tho' to no Purpoſe. Afterwards he came to the Sea in this Neighbourhood, and enter'd on a Cure in the following Manner.

℞ *Of Æthiops mineral one Ounce, Crabs Eyes ſix Drams, Crude Antimony prepared two Drams,*

Drams, Vegetable Æthiops two Drams, Powder of Vipers two Drams, Syrup of Violets enough to make an Electary, of which take the Quantity of a Nutmeg Morning and Evening, drinking a Pint of Sea Water *early every Morning.*

He took these Medicines two Months, and towards the End of the Cure I added;

℞ *Tincture of Antimony, Balsam of Gum Guaiacum, of each equal Parts. Take* 30 *Drops three Times a Day.*

Thus the Scorbutic Eruptions were not only cured, but also a Rheumatism which had seiz'd him after the Salivation.

CASE XXXVI.

— A Dry Leprosy seiz'd on the Head and almost all the Joints, the Body being sprinkled over with Leprous Spots. This was a most troublesome Case, and which could admit of no Cure without a steady, and a long Course. The Patient continued to drink a Pint of *Sea Water* every Morning during nine Months, without any Intervals, and patiently bearing the Tediousness of the Cure, recover'd his Health.

CASE

CASE XXXVII.

— AN Eryſipelas poſſeſſed both Thighs, and the Tenſion of the Veſſels was ſurpriſing, and the Blood was ſo ting'd with Bile, that upon preſſing the Skin with the Finger it ſeemed not ſo much of a Saffron, as quite of a Golden Colour.

The Patient took only a Pint of *Sea Water* every Morning for ſeven Days, and all the Tumor being ſuppreſſed, the Patient recover'd without any other Aſſiſtance.

D. Turner, Apothecary,
at *Brighthelmſtone*.

CASE XXXVIII.

Of a Scirrhus of the Liver.

A Certain Perſon came to me greatly complaining of a Scirrhus of th[illegible]. The Tumor was hard, large and uneven; his Eyes ting'd with a Suffuſion of a Saffron Colour, and his Skin ſprinkled with itching Eruptions. In this Extremity the Patient had recourſe to the Uſe of *Sea Water*, by the Help of which the Jaundice and the Eruptions of the Skin were much relieved, but the Scirrhus of the Liver continued in the ſame State after the Uſe of *Sea Water* as before; and indeed I have never any Hopes of Relief from *Sea Water* in a perfect Scirrhus, as I obſerved before in the Patient that was ſhewn

to Dr. *Johnſon*; for in that Caſe the Diſeaſe of the Skin alone was diſperſed by bathing in the Sea, and other Aſſiſtances, the grievous Diſeaſe of the Liver continuing the ſame. But in theſe Caſes, which are more troubleſome, from various Diſorders, I have found not a little Help from Tartar Vitriolate, yet whenever it is uſed, Care muſt be taken that the Tartar Vitriolate is not made too acid; to obviate which Inconvenience, I often uſe to mix with it ſome Salt of Tartar, riſing by Degrees from ſmall to larger Doſes, according as the Stomach of the Patient would bear it.

CASE XXXIX.

Of the American *Scrophula, or King's-Evil.*

A Boy entering upon his thirteenth Year, who was a Native of *Jamaica*, was ſent by his Friends to *Brighthelmſtone*, to be under my Care. His Neck was full of ſcrophulous Tumors; his Head alſo was ſtrangely overſpread with Tumors reſembling a kind of a *Fungus*, of a dark brown Colour. The Bottoms of the Tumors, or rather their Roots, were firmly and deeply inſerted into the Pericranium, and their Heads were ſoftiſh and uneven, preſenting to the Eye a ſort of Pits like Sponge, and bleeding upon the ſlighteſt Touch. I preſcribed the Uſe of the Ointment of Tar before mentioned, having premiſed Venæſection;

tion; then he continued taking an Electary of Vegetable Æthiops, together with *Sea Water* every Morning for four Months; by this Method the Tumors, both in his Neck and Head, were entirely diſperſed and healed; yet there remained deep Scars in his Head as Signs of the Loſs of Fleſh by the corroſive Ulcers.

APHORISMS.

1 NATURE is the Healer of Diſeaſes.

2. A Phyſician therefore ſhould always have his Eyes upon her as the ſureſt Guide, and tread in her Steps.

3. Thoſe who labour under Glandular Diſeaſes before Years of Puberty, both Men and Women often grow well afterwards; the laſt by the breaking out of monthly Purgations; the firſt by the Change of the Conſtitution.

This appears more clearly, becauſe young Batchelors are often troubled with the King's Evil, who ſometimes upon marrying are cured ſpontaneouſly; the Matter that before flowed to the ſtrumous Tumors, being now diverted to other Parts. Wharton de Glandul. p. 247.

4. If obſtructed Glands in Women are not cured before the 45th Year of their Age, or thereabouts, then the Diſeaſe is renewed upon the ceaſing of the Menſes.

5. But thoſe, who are troubled with obſtructed Glands, if they are put under the Care of a ſkilful Phyſician, before the Age of Puberty, may for the moſt Part be preſerved from the Generation of Pus, by a due Treatment of the Glandular Secretions; but when they have attained the Age of Puberty, Nature generally finds ſome Means to help herſelf, till ſhe is oppreſſed with the Burthen of old Age.

6. Thoſe Glands, which do not adhere ſtrongly to any Part, nor are painful, nor are grown hard with repeated Inflammations, and have again ſubſided, are chiefly curable by *Sea Water*.

7. If a morbid Gland, either of the Lungs, or of any other Part hath proceeded to Maturation, there *Sea Water* is of no Uſe, till the retained Matter is diſcharged.

8. In tumefied Glands, when the Parts have coher'd ſo long and ſo firmly, that no Force either of the Heart, or of Medicines, can open their compreſs'd Tubes; then the Hand of the Surgeon is the only Remedy.

9. But every Tumor, which hath not proceeded thus far, nor has any broken Veſſels, is curable by a due Treatment of the Glandular Secretions.

10. When, upon making a Revulſion, the Fluxion paſſes from one Gland to another, then *Sea Water* is always to be uſed, till the ſuperfluous

fluous Humours are discharged by the intestinal Glands.

11. When the Glands are no longer burthened, and hence the Tumors decrease; then cold Friction of the Part with the Fucus, and *Sea Water* to confirm the Tone of the weak Parts, produce great Effects.

12. Towards the End of the Cure, Gall-Nuts, Peruvian Bark, and cold bathing in the Sea, may be properly prescribed.

13. When *Sea Water* does not pass off soon by Stool, it excites Thirst, till the Glandular Secretions have carried off the bituminous Salts, and the Quantity of the Humours is restored that ought to be carried to the Glands of the Throat; and this is performed when the Effect of the *Sea Water* upon the Glands of the Intestines ceases; this Thirst is sudden, and of short Continuance, altho' the Evacuation is large.

14. Those Women who have not their Menses, are often cured by the Use of vegetable Æthiops and *Sea Water*; when they are of a more thin and hot Constitution than will bear the Use of Gums and Chalybeate Medicines.

15. In those Cases, which are attended with a very great Acrimony, I think, the *Sea Water* does sometimes irritate too much; but this may be rectified by a Milk Diet, with Absor-

bents; and then, even theſe Diſeaſes are curable by *Sea Water*.

16. Tumefied Glands, by Reaſon of their weak Tone, are liable to freſh Attacks of the Diſeaſe.

17. The Impoſthumes of the Glands, often riſe again near the old Scars, if the Coat of the Gland is not entirely deſtroy'd or conſum'd.

18. Thoſe Glands, which are not ſtrongly compreſſed by any Force, are chiefly attacked with Fluxions (becauſe they are lax;) and perform their Offices more ſluggiſhly.

19. Therefore the Fluxions chiefly of the Upper-Lip and Noſtrils, uſe to return again after a Cure, and the Cure in theſe Parts, is performed with more Trouble than in any other Parts.

20. The Diſeaſes of the ſmall Glands, are not ſo eaſily cured as thoſe of the larger.

21. Many Ulcers of the Mouth and Tongue, which nearly reſemble Cancers are often relieved, and ſometimes alſo cured by Sea Water, and other Medicines.

22. Sea Water is good againſt Putrefaction, and reſtrains the Ruptures of the Veſſels.

23. The Cure of Tumors in the internal Glands, is ſafeſt by Sea Water; and no outward Application is to be uſed till the Habit is changed, and the inward Glands reliev'd.

24. Sea Water keeps the Body from being bound; and thereby affords an eaſier Paſſage to the ſmall Stones and Gravel, out of the Gall-Bladder.

25. Sea Water is a very ſafe Purge with Soap, in a curable Jaundice, becauſe it diſſolves and diſcuſſes the Tumors of the Glands of the Liver.

26. Deafneſs, that proceeds from a ſcorbutic Fluxion upon the Glands of the external Parts of the Ear, is curable by Sea Water.

27. Tumors in the Alimentary Tube are diſcuſſed by Sea Water, if they are neither impoſthumated, nor ſcirrhous, nor cancerous, for this Remedy ought not to be uſed while the Parts labour under an Inflammation.

28. Leanneſs and a hectic Fever, when they proceed from the Defect of the alimentary Tube are commonly conquered by Sea Water.

29. Sailors by Sea Water, are freed from the returning Fits of bilious Colics, after the Inflammation is removed by bleeding and lenitive Purges.

30. When a Gland continues in a State of Inflammation, Bleeding, Nitre, lenitive Purges, and whatever may prevent Abſceſſes, are to be uſed.

31. When the Inflammation is removed, Sea Water is proper; as it diſperſes Tumors, and ſtrengthens the Tone of the weak Parts.

32. A Fever, attended with Shiverings in glandular Diſeaſes, is generally a Sign that *Pus* is maturated.

33. A tumefied Gland begins firſt to be diſperſed in the ſoftiſh Edges of the Tumors, and proceeds thence till the neighbouring Parts are reſtored to their firſt Form and Magnitude; then it may be plainly diſcerned, whether it is a ſingle Gland or a Maſs of Glands that are morbid; and if the Tumor ſeems fix'd, and adheres to the Part it lies upon, and is alſo pretty hard, then the cold Bath is not yet to be uſed.

34. But when the Gland is leſſened and diſjoined from the Part it lies upon, and becomes ſomething ſofter to the Touch; then the firſt Lotion of the milder Fucus, and afterwards by Degrees the Uſe of the fermented Fucus, or marine Soap, is beneficial above all things; the Cure is to be finiſhed by cold bathing in the Sea, drinking every Morning enough Sea Water to procure two or three Stools a Day, immediately upon coming out of the Sea.

35. The Glands by Reaſon of their lax Tone, are more ſubject to the Injuries ariſing from Plenitude than any other Parts of the Body; therefore, the Diſeaſes of the Glands generally return, unleſs the Uſe of Sea Water, and bathing in the Sea are continued, till the Parts have recovered their due Tone. Hither may be referr'd

ferr'd the Aphoriſm of *Hippocrates*, which is alſo mentioned by *Celſus*, *That if a Woman has Milk without being pregnant, or having had a Child, the Menſes are deficient.*

Thoſe Glands, which have often ſwelled, and have again partly ſubſided, and which upon new Fluxions, have been more ſwelled than before, ſuch Glands do ſeldom entirely recover their native Form and Beauty.

37. And by Diſſections, I find the Reaſon of this to be, that Nature, to prevent the bad Effect of the Preſſure of the Glands that are growing hard, prepares for them a ſort of *Stratum*, or Wrapper of Fat, upon which the Tumor may lie and reſt; and this encreaſes the Bulk of the Part, and renders it deformed.

38. But the Glands, which have this Cover of Fat, if they are not cured by Sea Water, are nevertheleſs freed from the Fear of Impoſthumes, and ſo all the Danger of a purulent hectic Fever, and a Conſumption is avoided.

39. But if this Deformity of the Part that remains, gives any Uneaſineſs to the Patient; it may for the moſt Part, be taken away by the Hand of a Surgeon.

40. When by the Help of any Part, any Evacuation or Separation from the Blood hath been performed for a long Continuance, and as it were by Cuſtom, and the Perſon receives no Injury thereby; then that Evacuation is not to

be turned another Way, but is rather to be continued in the ſame Channel, if in paſſing out of the Body it is not attended with much Trouble or Danger.

41. But if it is very troubleſome, and likewiſe dangerous, it is not to be turned another Way till we have firſt ſubſtituted ſome other Evacuations in its ſtead, either by Iſſues, or Bliſters, or by conſtant purging with Sea Water; that by theſe Means, a Paſſage may be made for the ſuperfluous Humours to diſcharge themſelves as uſual, by the Glands of the Inteſtines.

42. All critical Tumors of Fevers, are to be left to the Strength of Nature; that we may ſee what ſhe can perform either by way of Suppuration, or Diſſipation, before we have Recourſe to the Help of Sea Water; that is, if the Pus is generated in a ſafe Place.

43. If the Obſtruction is removed, which had principally affected ſome Glands, it commonly attacks others, unleſs timely prevented by a judicious Treatment of the glandular Secretions; and this Danger in its firſt Riſe, is often apparent to the Sight; ſo that it is uſually obſerved, when an Obſtruction of the pulmonary Glands is removed by Art or the Strength of Nature, that the Diſeaſe appears again afreſh in the Glands of the Neck.

44. In promoting and augmenting the glandular Secretions, either by the Glands of the Mouth and Fauces with the Help of Mercury, or by the Glands of the Inteſtines, by the Help of Sea Water; Regard muſt always be had to the Strength of the Patient.

45. As Mercury is by Nature cauſtic, and makes an Eſchar, and excites Pain, and ſtimulates more than Sea Water; ſo in ſlender People, by Reaſon of the great Evacuations it promotes, it commonly brings on a hectical Habit.

46. But if in the Uſe of either of theſe Remedies, the Pulſe grows quicker than it ſhould be, or the Appetite is leſſened, or the Body waſtes by Degrees, theſe Signs ſhew, that the Evacuation is greater than the Strength of the Patient will permit; then it is to be ſuſpended for a Time, and Aſſes Milk, and abſorbing Medicines are to be uſed in its ſtead, which yet very rarely is neceſſary after taking Sea Water.

47. Hot and thin Habits oftener bear without any Inconvenience Sea Water alone, when they reject hotter Medicines, altho' join'd with Sea Water.

48. But the more fleſhy Habits, that have vitiated Glands, do very well bear Æthiops, Cinnabar, Antimony, and the Aſhes of calcined Submarine Plants, and the like Medicines joined

joined with Sea Water, and Sea Water is thereby greatly aſſiſted.

49. Sea Water is endued with many and great Virtues; but the Unſkilful may make a very bad Uſe of it.

An Appendix *concerning* Sea-Wreck, *or* Quercus Marina.

Sea-Wreck is a Submarine Plant, growing upon the Rocks and Shores; and by Reaſon of a certain native Soap, is ſo ſlippery, that it makes the Feet ſlip of thoſe who walk upon the Rocks to which it adheres. Enquiring more curiouſly into this Matter, I found the Plant about the End of *July* burſting its Veſicles or Pods, and pouring out a ſoapy Juice upon the Rocks and Shores. About *Autumn* the Plant ſhoots afreſh from the Branches of the Year paſt, at every flowing of the Tide, the Branches float in the Water by the Help of certain Veſicles, or little Bladders, which are filled with Air for this Purpoſe; and at every Reflux of the Tide being left by the Water, they are dried upon the Rocks and Shores: And the Plant continues in this State, till about the vernal Equinox, when the Shores are warmed by the Sun's Heat at every ebbing of the Tide; then the Vegetation is moſtly promoted, and the Veſicles or Pods begin to ſwell with a certain

tain ſoapy Liquor; and this thickens by Degrees from *March* to *July*, till at laſt, as before mentioned, the Veſicles burſt, and the Vegetation proceeds in the Method aforeſaid.

From hence we may infer, that by how much nearer the Plant is arrived to a State of the moſt perfect Maturity, by ſo much the more its Juice may be diluted with Sea Water.

In the Cure of morbid Glands, I found there was need of ſome ſlippery Soap, which being mixt with Sea Water, was fit to diſcuſs Tumors; and indeed, *Pliny*'s Decoction of Frogs is uſed more ſucceſsfully than the common Plaſter of Frogs; but this Remedy was not always to be had, and indeed was none of the cleanlieſt; therefore, I ordered the Tumors to be rubbed with this Plant, newly taken from the Rocks, and dipt in its own Juice, and I found this of great Benefit in the Decline of the Diſtemper.

Moreover, as it abounds chiefly with a certain native Soap and Salt, I gave it inwardly in Powder, to the Quantity of one Dram; I obſerved the Taſte of it was ſomewhat like Oyſters, and that a large Doſe of it was nauſeous to the Stomach. Afterwards I calcined it in the open Air, and found it converted into a very black *Æthiops*; which in this Work, I have ſo often called the VEGETABLE ÆTHIOPS. The Plant being reduced to Aſhes, contains a bitu-

bituminous burnt Sea Salt, an Alcaline ſulphureous Salt, together with its native Soap, after the Water is dried away by Fire; and this I uſed ſucceſsfully inſtead of burnt Sponge, and I think it far exceeds it in Virtue.

I alſo uſed the Æthiops of the ſame Plant for a Dentifrice, to help the Looſeneſs of the Gums, and to clean foul Teeth; this happily anſwer'd my Expectation, and gave me in this Inſtance, a great and freſh Proof of its deterging Quality.

Experiment I.

FIrſt, I tried to haſten the Growth of the Plant, that I might thereby ſooner obtain its ſoapy Juice. Therefore, I gathered ſome Veſicles or Pods in the Beginning of *March*, and poured an equal Quantity of Sea Water upon them; then I placed them in a Window which look'd to the Weſt, and was warm'd by a Fire every Day.

At the End of a Week I found the Pods turgid and full of its proper Juice, but it was thinner and paler than it uſed to be in the Summer Months; yet I anointed my Hands with it. It deterged the Skin very greatly, and render'd it ſmooth and ſoft; but did not ſtimulate ſo ſtrongly as when it is prepared in the Summer Months by Fermentation with Sea Water. Therefore, in thoſe Caſes which do not require a great Stimulus, it is both a mild Lotion, and an extraordinary *Fucus*.

Then

Then I alſo made a Liniment of that and Cadmia levigated, and laid with a Pencil upon the Eyelids of certain Patients two or three Times a Day, and ordered them at the ſame Time to waſh their Eyes Morning and Evening with Sea Water; this Method preſerved the Parts affected free from Excoriation, and dried up the Fluxion of the Humours, obſerving to purge daily with Sea Water; then alſo, I gave inwardly the Juice ſqueezed out of the Veſicles or Pods, againſt ſharp, ſcorbutic Fluxions upon the internal Glands. I preſcrib'd it, inſtead of Snails, with Cream, drinking after it, either Eryngiated or Aſſes Milk.

It ſat eaſy upon the Stomach, and unleſs I am miſtaken, it anſwered my purpoſe. How far this Medicine may be uſeful, I leave to be confirmed by Experiments of other Perſons.

Thus far I have conſidered this Plant, before its Fermentation with Sea Water; now I ſhall take Notice of its various Changes, when it is more ſtimulating and penetrating.

EXPERIMENT II.

THAT I might have the ſoapy Juice of this Plant at Hand after *July*, I put ſome of the Veſicles or Pods perfectly ripe into glaſs Veſſels; then I poured equal Parts of Sea Water; in ten Days Time the Veſicles gene-

generally burſt; a certain Mucilage flow'd out about the Thickneſs of new Honey; I applied it outwardly in this State alſo, and found it more deterſive than before.

EXPERIMENT III.

THE ſame Juice after ſome Months, became thinner and fœtid; but even then, it was more penetrating and ſtimulated the Palm of the Hand with a pricking Senſe of the Nerves.

EXPERIMENT IV.

THEN I tried how far that deterging Quality might be increaſed by Fermentation; for this purpoſe I kept a Veſſel in the Window near the Fire, from *July* to the following *March*; then the Juice became thinner, and alſo ſo ſharp, that it penetrated the Skin in an Inſtant, and excited a Senſe of ſlight pricking, and was as abſterſive as Soap-Lees; for it made the Ends of the Fingers wrinkled, and the Tips of the Nails paliſh; the fœtid Smell abated, but to take it entirely away, I put to it a little *Hungary*-Water; then, becauſe I remembered that the Ancients order'd a warm Fomentation of Sea-water in paralytic Diſorders, I tried an Embrocation

brocation of this Medicine in the ſame Caſes; and am ſtrongly perſwaded, it was very beneficial; I alſo apply'd the ſame ſucceſſively in the Decline of Tumors of the Glands, for it diſcuſſes excellently well.

EXPERIMENT V.

I HEATED this Juice, then I drew ſome Lines upon Paper with Violets freſh gathered; the Colour of the Violets was thereby turn'd green, therefore, by Fermentation it becomes an Alcali.

EXPERIMENT VI.

THEN I evaporated two Spoonfuls of the ſame Juice after Fermentation it afforded a little more than a Scruple of an acrid pungent Salt.

EXPERIMENT VII.

OF the Plant dried with its Veſicles or Pods and burnt in the open Air, is made the Salt Æthiops.

Theſe are the Remarks which I have made upon the Uſe of this Plant; it remains that I ſhould obſerve, that there are two Kinds; of which, the ſmooth Sort without Veſicles is fitteſt to rub Tumors.

The

The other Medicines which I take out of the Sea, are *Sea-Chalk*, *Coral*, *Coralline*, *Pumice-Stone*, *Cuttlefish-bone*, and the like; all which correct Acidities in the first Passages, *for their Qualities are entirely chang'd by the Salts, when they give a different Shape to these particles; thus Coral dissolved in Acids, is astringent and binding; given by itself, it is rather aperient and breaks the Points of Acids; thus also distill'd Vinegar extracts the opening Tincture of Steel.* Vid. collectan. chemic. Leyden. p. 286.

Of MADREPORE.

AS I mentioned before the Use of a Lime made of Shells, I have inserted a Print of *Madrepore* fronting the first Page, which Figure I took from the Voyages of Father *Labat*. There are several Species of this Plant, which is to be plac'd in the Class of Corals. If it is levigated upon a Porphyry and given inwardly, it is powerful in correcting Acidities, and suppressing Fluxes of the Belly.

But when it is calcined, it becomes a great Alcali; and its Salts received into the Blood, do not only sweeten it, but also cleanse and purge off Obstructions of the Glands. But every Calx of this Kind

should

ſhould be newly made and kept dry. I could ſubjoin ſomething more concerning the Virtues of other ſubmarine Plants, or ſubmarine Medicines, but I chuſe to defer it till I have further conſidered the Matter, and have had their Virtues confirm'd by more Experiments.

Three LETLERS *from the celebrated* RICHARD FREWIN, EDWARD WILMOT, *and* WILLIAM LEWIS, *M. D. D.*

LETTER. I.

From Dr. Frewin, *to* Dr. Ruſſel.

SIR,

WHEN you was at *Oxford* ſometime ago, and conſulted with me and Doctor *Lewis* about your Son, we often diſcourſed upon Medicinal Subjects, and eſpecially on certain Medicines that were leſs known, or little underſtood. Amongſt theſe Diſcourſes, we mentioned *Sea Water*, which you yourſelf had uſed long ago in the Cure of the Scurvy, and many Diſeaſes ariſing

ſing from Tumors of the Glands; and as you intended to write a full Diſſertation upon *Sea Water*, you deſir'd me to communicate to you any Remarks I had made upon the Uſe of it, I therefore perform my Promiſe in ſending at length the following Caſe.

Auguſt 28, 1744. The Wife of a Clergyman, living in the Country, came to me, who was Mother of many Children: She was of a very robuſt Conſtitution, and full of Blood; her Hair black; her Face red, inclining to yellow; her Eyes were ting'd with a Jaundice Colour; her Pulſe ſtrong; all which were manifeſt Tokens of a ſanguine Conſtitution inclining to a bilious Temperament: She complain'd of a Colic Pain and frequent Returns of the Symptoms of a Jaundice. When ſhe was free from theſe Symptoms ſhe had a tolerable Appetite, without any Inclination to vomit, no Nauſea after eating, or Inflation of the Belly, nor any Pains in the Bowels. But upon the Attack of the Colic her Pulſe was ſtrong and quick, her Tongue rough and yellowiſh, her Body bound and the Fæces whitiſh, her Urine was thick and ſometimes red, and oftener of a Saffron Colour. When therefore I had conſider'd that this fix'd and ſettled Pain chiefly continu'd in the right *Hypochondrium*, and never

never moving towards the Navel, nor near the Kidneys, nor to the left Side, and that it was encreaſed by Riding and Exerciſe, or any vehement Motion; upon this I judged the Diſeaſe ow'd its Riſe and increaſe not to any acrid Matter, or to a Redundancy of the bilious Humour, but to Stones, either in the biliary Ducts of the Liver, or in the Gall-Bladder. Therefore to prevent an Inflammation or Fever that might happen by the Continuance of the Pain, I order'd her to bleed in the Arm twelve Oncens.

The Surface of the Blood was very red and bright, the lower Part quite black, the Serum greeniſh, and evidently ting'd with the Gall; therefore the Patient took a Bolus this Night compoſed of

Quickſilver Alcaliſat. half a Dram, Sperma Ceti twelve Grains, Species Diambræ without Perfumes three Grains, Conſerve of Marſh Mallow-Flowers half a Scruple, Syrup of Violets, enough to make a Bolus.

And next Moring this Draught.

℞ *Of the beſt Manna one Ounce,* Glauber's *Salt three Drams. Diſſolve them in two Ounces and a half of Milk-Water and ſtrain it, then add Syrup of Buckthorn one Ounce, Elixir Salutis half an Ounce, compound Spirit of Lavendar one Dram. Mix them*

them for a Draught to be taken early in the Morning ſleeping after it if poſſible.

I order'd all her Stools to be diluted with warm Water and ſtrain'd thro' a Sieve.

Auguſt 29, ſhe had ſix Stools, and there was found in the Sieve above an hundred Stones of various Shapes and Sizes, which were outwardly of a dark brown Colour, ſuch as are deſcrib'd in *Med. Syſt.* Tom. 4 Part, 2. ſect. 2. cap. 3. by *Hoffman*, who is by much the beſt Writer of all foreign Phyſicians

The Purge having operated in this manner, and with this Event, becauſe the Patient ſeem'd to be a little faint, I preſcrib'd this Medicine to be taken going to Reſt.

℞ *Salt of Wormwood twenty five Grains, Juice of Lemons ſix Drams, or enough to ſaturate the Salt, ſmall Cinnamon-water one Ounce, Nephritic Water half an Ounce, Syrup of Saffron three Drams, Tincture of Species Diambræ twenty Drops, Crabs Eyes prepared fifteen Grains, Sal Prunellæ ten Grains. Mix them for a Draught to be taken going to the Reſt.*

Then that I might help both the Defect of the Liver and the Colic Pain, I preſcrib'd the following.

℞ *Roots of Parſly and Aſparagus, freſh and cut in Pieces, of each half an Ounce. Pour upon*

upon these twenty Ounces of boiling Spring Water, and let it infuse a quarter of an Hour in a glazed Earthen Vessel covered. To thirteen Ounces of the strained and settled Liquor add Nephritic Water one Ounce, Syrup of the five opening Roots, and Syrup of Violets, of each half an Ounce, Sal Prunellæ and Diuretic Salt, of each one Dram. Take four Ounces of this Infusion warm three times in 24 Hours.

℞ Venice *Soap and Diuretic Salt, of each half a Dram. To the Solution, in ten Ounces of Fennel-Water, add small Cinnamon Water, and Nephritic Water, of each half an Ounce, Syrup of the five opening Roots three Drams. Make them into a Draught to be taken early in the Morning, and at five in the Afternoon, and going to Rest.*

Within three Days the Jaundice disappear'd; but because the Colic Pain soon after return'd, the 2d and 13th Day of *September* the Purge was repeated, as before prescrib'd, and with the same Success, for the Fæces being wash'd, there was found a great many Stones like those before mention'd.

She staid at *Oxford*, and continued the Use of these Medicines five Weeks, for the most part free from the Jaundice, and the Colic Pain, and almost every Day voided some Stones by Stool.

When

When she was upon her Return home, I advised her to go to *Bath* for the sake of Bathing and Drinking the Water, by the joint help of which I had observ'd many Persons have recovered their Health in these kind of Diseases; but as her Domestic Affairs would not permit her to take this Journey, I advised her not to use the Medicines so often, but to drink half a Pint of *Sea-Water* every Morning at five o'Clock; and afterwards to sleep an Hour or two, to take off or avoid the Thirst which is commonly troublesome after drinking *Sea-Water*. Some Months after I was inform'd that this Woman had voided above three hundred Stones and continued in Health, and free from Pain; and being with Child; about two Years afterwards, she was brought to bed of a strong healthy Child; and she is still alive and well, and free from the Jaundice, and very rarely troubled with the Colic Pain.

I remember a Man, before I was acquainted with the Virtues of *Sea-Water*, whose Bowels produced such a large Quantity of bilious Matter that was converted into Stones, that he felt himself as it were inwardly bound with Iron Chain, and always complain'd of this to his Physicians; and as I often inspected his Stools, they look'd like Bits of Brickbats wrapt up in the Fæces.

I have

I have known likewiſe, that Stones have been form'd in the Gall-Bladder ſo large that they could by no means paſs through the Cyſtic Duct.

A Gentlewoman of a good Family, remarkable for the Gifts of Fortune, was very often tormented for many Years with a Colic Pain, and had had the Advice of the moſt eminent Phyſicians of *London*, and went often to *Bath* in the Spring, and to *Tunbridge* in Autumn, to drink the Waters. And in the Years 1740 and 41, before Summer began ſhe came to *Bath*, and committed her Health to my Care. She was then ſeldom and ſlightly affected with this Complaint; but drinking the *Bath-Water*, and bathing in the uſual Manner, ſhe conſtantly found Relief. In the Year 1744, where I then was the 13th of *June*, being at her Houſe in *Buckinghamſhire*, ſhe was ſuddenly taken with the ſharpeſt Convulſions of the Bowels, attended with the moſt racking Pain, and being ſeiz'd with a very acute Fever and an Inflammation of the Bowels, ſhe died in ſeven Days; at laſt the Anatomical Knife diſcover'd the Cauſe of her Diſtemper; for the Body being open'd, beſides an Abſceſs in the Liver, there was found in the Gall-Bladder ſix blackiſh Stones, almoſt growing together, each as big as a Nutmeg. In this Patient there never appear'd any Symptoms of the Jaundice. I have neither Leiſure nor Skill to diſcover what may

be the State of the Blood, or what the Condition of the Liver that generates ſuch a Quantity of Bile, or that diſpoſes the Body to form theſe kind of Stones: My Deſign is only to obſerve what great Power the daily drinking of Sea-Water has in curing theſe Diſtempers, join'd with Remedies compoſed of Quickſilver and Soap.

There is alſo another Caſe that is worthy of Notice, in which I lately experienced Sea-Water to be extreamly beneficial.

A Youth of Sixteen, a Scholar of *Wincheſter*-School, of a ſlender and lax Habit, growing ſuddenly tall, and therefore weak, loving the Water, and ſwimming well, laſt Summer uſed to go into the neighbouring River twice or thrice a Day, and ſwim in it too long, and often came home faint and ſhivering with Cold.

About the End of the Summer he complain'd to the Apothecary of a Dryneſs in his Belly, and of being unuſually bound; upon which he took a purging Draught and an opening Electuary, by the Uſe of which the Symptoms immediately diſappear'd, and the Lad thought himſelf pretty well.

About the Middle of *September*, 1748, his School-fellows obſerv'd him making ſtrange Motions with his Hands and Arms, and his Eyes ſtaring and diſtorted, his Head lying ſometimes upon one Shoulder, and ſometimes on the other while ſpeaking, and other ridiculous Mo-

Motions of his Limbs, ſuch as *Sydenham* deſcribes in the Diſeaſe called St. *Vitus*'s Dance. At laſt he was taken with a Lameneſs of his left Leg, ſo that he could ſcarce croſs his Bed-chamber without the Help of his School-fellows.

The moſt eminent Dr. *Mead* rightly aſcribes theſe Symptoms rather to a Relaxation than to a Diſtention of the Nerves; and indeed in this Youth the Muſcles of the Tongue and Pharynx, or upper Part of the Gullet, were ſo relax'd that he could ſcarcely ſpeak any Words articulately, or ſwallow any Food. As he lay in Bed his Tongue came out beyond his Teeth, and the Spittle flow'd out continually. In this State of Things the Patient was under the Care of Doctor *Bowles* of *Wincheſter*, who order'd him to be twice blooded at ſtated Intervals, and four times purg'd, and preſcrib'd him Remedies compoſed of the *Cordial Confection*, *Powder of Gutteta*, *Caſtor*, *and volatile Salt of Amber*, *with a Decoction of* Peruvian *Bark*, and the like Medicines, ſuch as are recommended in theſe kind of Diſtempers by the moſt approv'd Authors: He took Care alſo to have Bliſters applied to the Nape of his Neck and Wriſts.

About the Beginning of *November*, when Things grew worſe I was conſulted: Then I adviſed bleeding eight or ten Ounces on the 7th of *November*; that on the eighth the Purge ſhould be repeated, becauſe the new Moon was

the next Day; for the eminent Dr. *Mead*, and other skilful Authors in Physic, have rightly observed, that these kind of Diseases grow worse about that Time. I also desir'd the Patient might take an Electary twice a Day, composed of *Peruvian Bark*, *the great wild Valerian Root*, *and Cinnabar of Antimony*. I further advised to send him immediately to *Southampton*, as well for the Convenience of drinking the Sea-Water, as for going into the Sea instead of a *Cold bath*. Being carry'd thither he was put into the Sea the 17th of *November*, and afterwards every other Day.

November 23. After the fourth Time of going into the Sea, he was much better, although this Night being full Moon he grew a little worse.

November 24. This Night and every Day after, he drank half a Pint of Sea-Water, either going to Bed or early in the Morning, and bath'd in the Sea every Day.

Nov. 27. Every thing being chang'd for the better, the odd Motions of his Hands and Fingers being much less frequent, and the Use of his Tongue freer; being tir'd of taking Physic, I perswaded him to depend entirely upon drinking Sea-Water and Bathing therein, laying aside all other Medicines.

Nov. 30. Within three Days his Appetite return'd, his Limbs were stronger, and his Words pronounced more articulately.

De-

December 12. He came from Bathing daily briſker and ſtronger, and readier in expreſſing his Words. Neither on the 9th Day of the Month, though the new Moon was at Hand, had he any Convulſions or Trembling, or the leaſt Increaſe in any Symptom of his Diſtemper. Therefore, I order'd him to continue in the ſame Method till he had recover'd his perfect Health.

Jan. 11. Being inform'd by a Letter, that the Youth was intirely recover'd, I adviſ'd him to return to his former Method of Living by Degrees, that is to ſay, Firſt, That he ſhould bath in the Sea three Times, then twice, and then only once a Week; and ſhould drink the Sea-Water not ſo often, and in leſs Quantity, or only every other Night or Morning.

Feb. 8. The Patient came to *Oxford*, healthy and ſtrong, to ſee his Friends, and take ſome Recreation, intending ſoon to return to *Wincheſter*.

Worthy Sir, you may make what Uſe you pleaſe of this Letter, but proceed to illuſtrate with your penetrating Judgment, and eſtabliſh with the Authority of your Experience, the Art of Phyſic, in which you have long labour'd with the greateſt Induſtry.

Oxford, February 24th, 1748-9.

The Answer of Dr. RUSSEL *to Dr.* FREWIN.

SIR,

YOU have laid me under the higheſt Obligations for enabling me to adorn this Treatiſe with your judicious Thoughts, which you have ſo freely and candidly communicated, in which you have acted the Part of a very ſingular Friend. But perhaps you are ignorant how much it is owing to you and your Example, that was in a Manner my Guide, that I have ſo diligently enquir'd into the Way and Method by which the glandular Secretions ought to be treated; and will hardly ſuſpect that you laid the firſt Foundation of theſe Enquiries. For when I read the Letters of the very ſagacious and learned Men which Dr. *Friend* has annex'd to his Commentary on Fevers, amongſt which your Name alſo is ſeen, it appear'd plainly, that in curing that Fever of the Small-Pox, which comes on upon the Decline of the Diſeaſe, you all with one Conſent, plac'd your greateſt Hopes in carrying off the morbid Matter, by the inteſtinal Glands; and that Nature often effects this by the Help of a Looſeneſs, as is obſerv'd in the ſame Work by the moſt celebrated Dr. *Mead*, to whom you know the greateſt Regard is due, not only from us who profeſs the Art of Phyſic, but from all Lovers of Learning in General, for his extraordinary Cultivation and Patronage of the politer Arts.

There-

Therefore, as I ſaw the moſt prudent Phyſicians were agreed in this Opinion, and were under no Fear that the morbific Matter ſhould return into the Blood, which generally perplex'd Phyſicians; and as I obſerv'd, that by leaving the common and beaten Path, they had acquir'd immortal Honour; and had done ſingular Service to Mankind; I was no longer dubious, but concluded, that the ſame Secretion, continued a long Time by the inteſtinal Glands, would moſt certainly prove beneficial in moſt chronical Caſes, when any Diſtempers have a long Time poſſeſt the Glands, or any laxer Parts of the Body. For, if a roſinous Purge may be given without Danger in an eruptive Fever, I readily concluded, that a ſaline Purge might be given in the ſame Manner, when the Diſeaſe was neither acute, nor attended with any Fever; but in the mean Time, it appear'd to me extremely difficult, how to procure ſuch a Medicine that ſhould do the Office both of a Purge and an Alterative, and which ſhould conduce both to cleanſe the obſtructed Tubes, and carry off Redundancies, and likewiſe ſtrengthen the Tone of the Fibres. Therefore, about the Year 1724, when I had again read thoſe Letters of *treating the glandular Secretions*, and of the various Medicines which may be applied to various Parts; I drew out a Sort of a Sketch, and ſent it to my very learned Friend *B. S. Albinus*, at that Time Profeſſor at *Leyden*; but as this was a rough

and imperfect Piece, and not worthy this Age, and the Experience which I have obtain'd in the Space of more Years, I thought proper to publiſh ſomething more perfect upon this Subject; eſpecially becauſe, having conſider'd the Uſe of Sea-Water, I ſeem'd at length to have found a Remedy, which would do the Work propos'd, without any Danger.

And I was confirm'd in this Opinion, by the Letters of Dr. *Friend*, that Light of your Univerſity; I mean, his Remarks on inteſtinal Excretion, and purging in an Eryſipelas of the Head; and I alſo have ſeen this Diſeaſe happily treated, with the Help of Glauber's Salt; ſo that if I had any Scruples remaining, they were all removed by this Conſideration.

And being convinced by theſe Arguments, I thought it plainly appear'd, that Nature had form'd theſe Paſſages and Excretions, that they might be ſubject to the Command of the Phyſician, more than all the reſt; and that whenever it was requiſite for Health, they might afford a ſalutary Diſcharge to all ſuperfluous and noxious Humours.

Having premis'd theſe Things, there is ſtill ſomething remaining beſides what I have ſaid before in this Work, concerning which, I ſhould take ſome Notice; eſpecially as you gave me an Opportunity of ſeeing its Effects in the elegant Caſe you ſent of St. *Vitus*'s Dance; I mean, thoſe Things which it is neceſſary to obſerve

ſerve in uſing the Cold Bath; and I do this the more willingly, becauſe the Uſe of Sea-Water either internal, or external, is not of ſuch a Nature as to do neither good nor harm; but we are to judge as the celebrated *Mead* has ſomewhere obſerv'd, that in all Things which our Art contains, there is nothing that does good, but what may alſo do harm. I ſhall write to you upon this Subject, without confining myſelf to any particular Order or Rules of writing, not intending to give an accurate Account of the Cold Bath, but ſhall ſet down every Thing, as it occurs to my Memory. In the firſt Place therefore, it is to be noted, that neither the Cold, nor Hot Bath, is to be enter'd into after eating or drinking freely; which the Ancients avoided ſo carefully, that they judg'd it neceſſary to abſtain both from eating and drinking, for a ſmall Time after coming out of the Hot-Bath; but in the Uſe of the Cold-Bath, a little Draught of Sea-Water is convenient immediately upon coming out of the Sea; becauſe, by purging the Belly, it prevents the Blood from flying into the Head, and preſerves the Patient free from the Head-ach; neither if this Method is obſerv'd does the Noſe bleed, which otherwiſe does ſometimes happen; nor are the Glands of the Neck ſubject to ſwelling, as they are ſometimes when the Patient uſes the Cold-Bath too ſoon.

Moreover a perfect Repoſe of the Body, and Calmneſs of the Mind, is to be obſerv'd, before

the Use of the Cold Bath; and all Exercise of the Parts affected must be forborn, that the Fibres by these Means, when they contract themselves, may have the greater Force to overcome any Obstruction; which if they are tired before with any Labour, is not so easily affected, and I give the greater Caution about this, both because I have seen some Persons bathe after hunting, and other rural Exercises without any Regard to Time or Circumstances; and also, because I have seen others err in a different Way; for as Sea Water greatly conduces to strengthen the debilitated Power of the Fibres, if it is given after due Evacuations, and after the Obstructions are something relieved by internal Remedies; so I have seen the same Water do Harm in any Plentitude, or any troublesome Obstruction of the Tubes, that still continued painful; for in these Cases, the Solids are distended, and thereby more weakened; because they strive to throw out that with a great Force which in this State of Things can by no Means be ejected.

And I observ'd this more than once, and sometimes in hard Tumors upon the Joint of the Knee, when I have order'd cold Water to be pour'd upon the Part affected, and the Cold Bath to be used, though the Obstructions were diminish'd before by internal Remedies, even here by a too hasty Use of the Bath, these Cases seem'd to grow worse. But

But altho' I deſpair'd of thoſe Patients, as being incurable; yet after repeated Fits of intermitting Fevers, which ſhow'd that the Syſtem of the Glands had undergone a great Change, and when thoſe Viſcidities, which had been lodg'd a long Time upon the Part affected, by ſome Means were ſo diſpos'd, that they might be mov'd; then I have ſeen even ſuch Patients eaſily cur'd by Sea Water, and the Cold Bath.

Then the greateſt Care is to be taken, to know whether the Bowels are ſound, or not, before the Uſe of the Bath; for if the Lungs, the Liver, the Pancreas, the Spleen, or the Glands of the Meſentery, labour under any Diſeaſe, or Putrefaction, or Scirrhus, then the Bath will do harm; for altho' *Celſus* adviſes ſwimming in the Summer for the Jaundice; and *Antonius Muſa* alſo (who firſt inſtituted and promoted cold Bathing) preſcrib'd the Cold Bath for an Obſtruction of the Liver, which afflicted *Auguſtus Cæſar* after his Journey to *Spain*, as *Suetonius* relates; yet they who give an Account of the Emperor's Caſe, differ ſo much in their Relations, that we can draw no Inferences from hence for Practice.

But I have very often found Sea Water ſerviceable in the Jaundice, and *Celſus* mentions Salt Water, and ſalted Wines, as the chief Remedies in the Jaundice; but indeed, I never order'd the Bathing till the Obſtructions of the Liver were partly remov'd. There is alſo a-

nother

nother Kind of Cold Bath, when the Water falls, or is pour'd upon the Part affected; but this alſo increaſes the Strength of the Diſeaſe, if proper Care has not been taken to remove Obſtructions; becauſe it occaſions frequent Vibrations of the Nerves, and Contractions of the Membranes; but where it is neceſſary before the Uſe of the Bath, to take off the Burden on the morbid Part, and make a Revulſion, I have for the moſt Part found Emetics beneficial; and chiefly ſo in Diſeaſes of the uterine Glands, and of the Joints. Bathing in the Sea is generally to be uſed early in a Morning, becauſe it is not ſo cold as ſome Springs; and in moſt Caſes, I order a little Draught of Sea Water immediately after coming out of the Sea, which generally paſſes off ſoon, and makes the Patient chearful and procures a good Appetite; ſometimes inſtead of pouring *Sea-Water* upon the morbid Parts, I preſcribe a ſlight Friction with Sea-Wreck, without Veſicles, or Pods newly taken from the Rocks; and ſometimes in Palſies, I adviſe a Fomentation of warm *Sea-Water*, and rubbing of the Part affected with a Fleſh bruſh, to open the Obſtruction of the Part, till by a general Evacuation, the Patient is prepar'd for the *Bath*.

But Paralytic Perſons are very much fatigu'd, and their Spirits much depreſs'd, if they bathe in the Heat of the Day, as they bear Heat leſs patiently than Cold; and

how

how much the cold Weather relieves their Diſorder, appears from hence, that in the ſevereſt Cold of Winter, they walk better than when the Air is hot and moiſt. And though the Vapours of the Sea, which are exhal'd by the Heat of the Sun, are very plentiful, yet they are moiſt, and relaxing, and depriv'd of that Salt, which gives a firm Tone to the Solids; for there is little or no marine Salt exhal'd by the Heat of the Sun, which is plain from an Experiment delivered down to us by the Ancients; for the Seamen of thoſe Days uſed to obtain a very grateful, though ſmall Supply of freſh Water by this Means. *Seamen often ſuffer for want of ſweet Water, we ſhall therefore direct them how to find this Supply; Fleeces of Wool ſpread about the Ship, grow moiſt with the receiving the Vapours of the Sea, out of which ſweet Water may be ſqueez'd.* Plin. Nat. Hiſt. L. 31. C. 6.

And in paralytic Caſes, the Method of purging and the Cold Bath, to the beſt of my Knowledge, is to be preferr'd before any other Means; for this Diſeaſe ſeems to ariſe from a Relaxation of the Tone of the Parts; and therefore when they are oppreſs'd with Heat, the Evacuation by the Skin is increas'd, the animal Spirits are diſper's'd, and there is a more plentiful Diſcharge of Urine; the Conſequence of which is a Conſtipation of the Belly, which is ſometimes ſo troubleſome, that for ſeveral

Days

Days together, they have no Diſcharge by Stool, without ſome Aſſiſtance; therefore, if in theſe Caſes *Sea-Water* is rejected, it is abſolutely neceſſary to take another Purge; and indeed, if the Evacuation procur'd by purging is ten times greater than what is naturally uſual, yet as the Annotator on *Sanctorius* obſerves, it does not weaken the Patient more than if the Evacuation by Perſpiration was doubled; but cold Sea-Water renders the whole Habit healthy and ſtrong, and though perhaps it will not entirely cure a Palſy; yet with proper Evacuations premis'd, joined with internal Remedies, it is generally, as I think, more ſucceſsful than any other Method. It is not improbable that the Uſe of the *Sea-Bath*, after a Fomentation with warm *Sea-Water* might come into your Mind when you lived at *Bath*.

For, as I have heard many Years ſince, from my learned Friend Dr. *Oliver* of *Bath*, the warm Bath in order to attenuate and diſſipate the Humours, is commonly and ſucceſsfully uſed there before the Cold; and unleſs I am miſtaken, I have before obſerv'd, that if *Sea-Water* and cold Bathing do not ſucceed, I always reſolv'd upon a contrary Method; and that I have often cur'd Diſeaſes, that had before withſtood all the Power of *Sea-Water*, and the Sea Bath, after uſing a Warm Bath, and Aſſes-Milk.

I have further obſerv'd, in my Account of *Sea-Water*, the Uſe thereof in Diſeaſes of the

the uterine Glands; but if we would know the Benefit of cold Bathing in the Sea, as well in melancholly Madneſs, as alſo in the Bite of a mad Dog; as alſo in Impotency ariſing from the immoderate Uſe of Venery, and how greatly it helps all the glandular Secretions; the Writers of our Art are to be conſulted, the greateſt Part of which, extol its Virtues with the higheſt Praiſes. Laſtly, it is to be obſerv'd, that the Sea Bath is ſo ſucceſsfully us'd in ſcorbutic, and almoſt all cutaneous Eruptions, not only becauſe the Salts with which it is ſaturated do greatly deterge, and cleanſe the Skin better than common Water; but becauſe it penetrates through the Skin into the Glands, and mingles with their Juices, and wonderfully purges off the Phlegm, and Viſcidities that obſtruct the Tubes of the Glands, and thus removes the inward Cauſe of the Diſeaſe, as well as the outward Foulneſs of the Skin; and here moſt learned Sir, I ſhall make an End of Writing, leſt what I ſend you, ſhould look more like a Book than a Letter, and ſhould think myſelf extremely happy, if you, who are a principal Perſon, and as it were, the Maſter of the Art of Phyſic, in the moſt flouriſhing Univerſity, ſhould approve my Way of reaſoning. *I am*, &c.

A Letter from Dr. WILMOT *to Dr.* RUSSEL.

SIR,

I Delay'd writing ſo long on purpoſe, that I might have ſome Proofs, how beneficial Sea

Water

Water is in the King's Evil, either being drank, or applied outwardly, and that having experienced its Virtues, I might communicate my Obſervations to you according to your Deſire. My Wiſhes are at length accompliſh'd.

CASE I.

A Woman about Forty, in every other Reſpect healthful, was ſubject from her 15th Year to a freer Flux of the Menſes, but upon its decreaſing at this Time, ſhe was taken with ſuch a violent itching of the *Pudenda*, that ſhe could ſcarce ever refrain from ſcratching, and lay awake whole Nights, unleſs ſhe took Opium; which Senſe of itching continued to increaſe every Day; to compleat the Misfortune, a Heat and Hardneſs about the *Pudenda* miſerably afflicted the unhappy Patient; ſhe was a modeſt Matron, and utterly abhorred the Thoughts of being examined by a Surgeon, but upon my Advice ſhe ſent for a Midwife, who found many hard Tubercles approaching, the Size of Peas, lying hid in the Parts beforementioned.

As this was the Circumſtance, and that neither Medicines of Sulphur or Mercury, nor the Waters of *Holt*, *Scarborough*, nor *Cheltenham*, which ſhe drank ſeveral Weeks every Year, cou'd conquer, or even mitigate this troubleſome Diſeaſe, I had Recourſe to Sea Water, the ſingular Efficacy of which, in opening Obſtructions of the Glands, I was formerly acquainted with from your Accounts, and now from my own Experience

ence. I ordered her to bathe in the Sea every Morning, and to drink half a Pint of Sea Water immediately after bathing, and the ſame Quantity an Hour after; and to foment the Parts affected frequently every Day with Sea Water, and to apply a Linen Cloth wetted with the ſame Water, warm within the Parts at Night, keeping it there all Night.

In about ſix Weeks Time, the Woman began to recover, the Itching and Heat ceas'd, what before was hard and rough, grew ſoft and ſmooth, and the Tubercles entirely diſappear'd in about eighteen Weeks more; and together with theſe, which deſerves particular Notice, another Tumor diſappeared, which was certainly of the ſame Kind, that had long appeared very ugly under her Chin.

CASE II.

A Young Lady of noble Birth, juſt entering upon her ſeventeenth Year, was troubled to that Degree with hard Swellings continually riſing near the Breaſts, under the Ears, and in other Parts of the Neck, ſo that ſhe had no Reſt from the Diſeaſe, and no End of taking Phyſic.

In one Place, you might ſee a Knot riſing, growing, ſuppurating, and extremely difficult to heal; and being ſcarcely covered with a Skin, a new Knot would riſe in another Place, and begin to ſuppurate, giving a melancholy Example of others to come after.

When Things were in this Situation, and the:

the Diſeaſe had long exerciſed the Lady's Patience, nor any Relief could be obtain'd from Calomel, Mercury, Precipitate *per ſe*, and other Mercurial Medicines; when burnt Sponge, Coralline, Woodlice, Lime-water, with *Boyle*'s Infuſion of *Paronychia*, joined to the Uſe of purging Waters, were of little Service, and though they gave ſome ſmall Relief, were of no Uſe to diſperſe and intirely root out the Diſeaſe; upon conſulting with Mr. *Ranby* the King's chief Surgeon, by far the moſt excellent in his Art, we reſolved upon a new Method of Cure.

We order'd her to go into the Sea every Morning, and to drink as much Water thereof as would give two or three Stools a Day, and to waſh the Ulcers and the harden'd Glands frequently with the ſame Water warm; by this Method of Cure, continued about two Months, the Ulcers were healed up, and ſome of the ſtrumous Knots being intirely diſperſed, and the reſt mollify'd, the Lady recovered her former Health; ſhe returned to Town, and having experienced the ſalutary Effects of this Remedy, by our Advice ſhe ſo happily continued all the next Winter to drink the Sea-water every Day, waſhing with it warm, that ſhe enjoy'd her Health entirely free from her old ſtrumous Diſorder, or from any new Attacks thereof.

CASE III.

A Young Lady of the firſt Rank, about ſix Years old, was troubled with a ſtrumous Swell-

Swelling upon her Upper-Lip, the Axillary Glands were increaſed in Bulk, and grown hard; her Abdomen was unequally ſwell'd, with hard Knots here and there, which yielded not to the Touch; to this was join'd a dry Cough, without ſpitting, and a little Difficulty of breathing, eſpecially at Night.

Theſe plain ſtrumous Signs in the Lip, and the axillary Glands, gave me ſtrong Suſpicion, that the Glands of the Lungs and Meſentery, were infected with the ſame Taint, and were ſwell'd and grown hard, and that without timely Aſſiſtance there was Danger of their forming a Pus, which would produce a Conſumption of the Lungs, and an Atrophy, or waſting away of the Body.

After bleeding, I ordered five Spoonfuls of Sea-water every Morning and Night, which generally procured three mucous and very fœtid Stools, waſhing her Lip often every Day with the Sea-water warm.

By this Method of Cure ſtrictly continued for a Month, the Lip and the axillary Glands were ſoftened, and the Abdomen return'd to its natural Condition, but ſo that as the Swelling of the Abdomen declin'd, ſo much the more the Knots appear'd and reſiſted the Touch, which were before hid under the Tumor.

This Work ſo happily begun, three Months more were ſpent in the Cure, excepting every fourth Day in which the Patient was allowed to reſt

reſt; for the Swelling of the Lip was intirely ſubſided; the Knots of the Abdomen were no longer to be felt by the Fingers; the axillary Glands were plainly diminiſh'd, and would certainly have yielded in like manner to this Remedy, if the tender Age of the Patient could have born a longer Uſe of it; but being nauſeated with repeated Doſes, and ſuffering an immoderate Thirſt, which I have obſerved to torment all thoſe who have long uſed Sea-water, ſhe was hindered at this Time from proceeding ſo far as to remove that Tumor intirely; for her moſt noble and tender Parents, thought proper, not to exerciſe any farther, the Patience of their deareſt Daughter, thinking that thoſe ſmall Remains of the Diſeaſe leſs troubleſome, becauſe leſs in Sight, were of no Conſequence, or might be deferr'd till another Time. I could bring more Examples of thoſe who have been freed from the King's-Evil by the Uſe of Sea-water, but I think it needleſs to enlarge upon this Subject. I have ſelected theſe Caſes out of many, as they ſeem to have ſomething ſingular in them beyond the reſt, leſt by adding many parallel Caſes, I ſhould repeat the ſame Thing over again; a Repetition of many Caſes would be tedious, and give no Confirmation to the Truth of a ſmall Number, and would greatly tranſgreſs the Bounds of a Letter.

How great Thanks therefore, are due, and will be given to you by the Sons of Phyſic, who

have

have ſtruck out and communicated to them, ſuch an eaſy, ſafe, and (I might almoſt ſay) a certain Method of curing a Diſeaſe, which has hitherto been found ſo very troubleſome both to the Patient and the Phyſician. *I am*, &c.

Dr. RUSSEL's *Anſwer to Dr.* WILMOT.

MOST worthy Sir, I received your moſt obliging Letter, and tho' I have a juſt Senſe of the many Obligations I owe to your Friendſhip; yet I am at a loſs for Words to expreſs it; what you write, that you ſtill hold in the Opinion concerning the Virtues of Sea Water, which (in a very friendly Manner) you formerly readily entertained upon my Teſtimony, is very agreeable to me for two Reaſons, becauſe you did not reject this Medicine, and becauſe it did not deceive your Expectation.

But I am extremely pleas'd that you approve, and are convinc'd of its Virtues by your own Experience; for all Phyſic is generally, and ought to be built upon this Foundation; for the ſplendid Names of their Patrons, cannot long ſupport and defend bad Medicines; nor can the Authority of their Oppoſers long ſuppreſs and keep in Obſcurity, thoſe that are good; but they will at laſt break through the oppoſing Shades, and ſhine with greater Luſtre; altho' the Authority of its Oppoſers may give ſome Check to the Progreſs and Increaſe of any new Remedy; which you will eaſily remember to have happen'd in the Riſe and Progreſs of the

Peruvian

Peruvian Bark, and ſome other powerful Remedies.

And in the ſame Manner, in which I firſt recommended this Medicine to you, I have alſo propoſed it to the ſeveral Practitioners in Phyſic, with whom I have happened to converſe; imparting to them certain Facts and Experiments that they might judge of them, and being taught by Experience, might be convinced after ſome Years of the great Efficacy of this Method.

And indeed, as far as I can judge by my Experience in this Matter, it does not appear that any Hurt can ariſe from hence, unleſs it is raſhly uſed. Nor did I ever hear any Thing from my Friends, that diſcovered any hurtful Qualities in this Medicine, but rather all the Teſtimonies I received from them, unanimouſly agreed in the Praiſe of it, and confirm'd its Excellence and Virtues, as well becauſe it opens Obſtructions, and diſſolves hard Tumors, ſometimes even where the Heads of the Bones were affected; and becauſe it cleanſes and defends the whole Syſtem of the Glands from impure Viſcidities. All which it performs ſo wonderfully, and ſo ſafely, that I may truly ſay, that this new Medicine, is in a manner a Rein deliver'd into the Hands of the ſkilful Phyſician, by which he may govern the Secretions of almoſt all the Glands.

As to the free Uſe of Sea-water, and the Quantity which may be taken, it does not ſeem to me to be a Thing ſo much to be fear'd, as

ſome

ſome People imagine; for, I do not remember any Perſon who was hurt by too much Sea-water; for many Perſons have uſed it for a Year together, allowing ſome little Intervals of Reſt, with very great Benefit in ſome very obſtinate Caſes; and I now ſend you an Inſtance that lately happened of this Matter; you will find in my Treatiſe, the Caſe of a Patient who drank 25 Gallons of Sea-Water in an uninterrupted Courſe of purging; in the mean Time, the hereditary King's-Evil diſappeared by Degrees, and ſhe daily recovered a better State of Health, and ſhe never had a Relapſe, nor any Reaſon to ſuſpect one.

I call this Diſeaſe *Hereditary*, becauſe ſoon afterwards I ſaw her Brother labouring under a large ſuppurated ſcrophulous Tumor, reaching from the Ear to the Collar-bone.

And theſe Inſtances I think ſufficiently prov'd, that this Remedy is not liable to thoſe Inconveniences that ſome People apprehend; I may alſo add, that it opens Obſtructions, and ſuppreſſes Putrefaction, and defends from the Fear of an Impoſthume, and ſtrengthens the Tone of the Stomach and Bowels; and at the ſame Time, waſhes the Mouths of the lacteal Veſſels, and purges the meſenterical Glands; by which Means, a ſweet and healthful Chyle is tranſmitted to the Blood in due Quantity; and the Heat and Draught of hectic Habits, are hereby moderated; and to ſpeak my Sentiments, among all the Medicines that have a Place in the *Materia Medica* (and they

are

are almoſt innumerable) you will not find any other which may be continued ſo conveniently, and which ſo ſafely opens inward Obſtructions as *Sea Water*; if it is not raſhly uſed, nor the Veſſels of the Glands burſt, nor the morbid Parts grown perfectly ſcirrhous; for as it diſſolves external Tumors of the Glands, ſo in like manner producing the ſame Effects every where, it alſo diſperſes internal Tumors; for being inwardly taken, it chiefly carries off the morbific Matter by the Glands of the Inteſtines, which more meerly feel its Power and Stimulus, and moſt eaſily carry off the Diſeaſe by their Diſcharges; and ſo, by this Method of Cure, almoſt all the Syſtem of the Glands is exonerated, relieved and purg'd; as it is well known to happen in a Salivation, by the Help of the Glands of the Mouth.

But allowing *common Salt* to be taken by ſome Perſons in greater Quantity than is convenient, (altho', in my Opinion, this ſeldom happens) yet I do not admit that any Arguments can be drawn from hence againſt the Uſe of *Sea-Water*; for the Waters of the Sea are mingled with many mineral Springs flowing into it, and abound with the Helps of Bitumen and Nitre, and various Salts; and are in a Manner enrich'd with the Spoils of ſubmarine Plants and Fiſhes, and of other Things which are almoſt innumerable; therefore the *Sea-Water* is to be look'd upon as quite a different Thing from common Salt, which is evident from its different Effects; and

and Experience teſtifies, that the Uſe thereof is never attended with any bad Conſequences if it is given with proper Caution.

And that it confirms the Tone of all the Parts, and gives Strength and Vigour to the whole human Frame, may be infer'd from hence, that thoſe are moſt inclin'd to Venery, and are ſtimulated to it that uſe ſalt Meats, as it is generally ſaid of Sailors. And it is probable, that the Antients were well acquainted with this Property of Salt, as they feign *Venus* to be born of the Sea, who was the Goddeſs of Love and Pleaſure.

Salt is alſo a kind of Inſtrument in the Hands of Nature, which ſhe uſes for the Procreation of all Kinds of Plants and Animals, and it is neceſſary that there ſhould be a due Proportion of it in our Blood, and upon it, in a manner, our Health depends; for if the Kidneys, or any other Glands, are not ſufficiently ſtimulated to perform the Secretions neceſſary to Health, and preſerve entire the elaſtic Force of the Solids; then the due Secretion of the Lympha being leſſen'd, a Dropſy enſues.

But where this Salt fails, and is not ſufficient to ſtrengthen the Tubes of the Veſſels, the Veſſels are thereby relax'd and loſe their proper Tone, and alſo ſuffer the Fluids to paſs through imperfectly ſecreted: Which happens in a *Diabetes*; for when the Urine begins to flow without this Salt which abounds in the Urine of all

healthful Perſons, and reſembles the Sweetneſs of Honey, then preſently the Tone of the Kidneys being depriv'd of its due and neceſſary ſaline Stimulus, is more and more relax'd, and the ſmall Veſſels are weaken'd to ſuch a Degree, that they pour out the Urine in a copious and almoſt uninterrupted Stream, 'till the Urine ſometimes flows out mingled with the Chyle. And ſome affirm, that red Wine has paſs'd thro' the Kidneys without any Change of Colour. But this morbid State of the Kidneys is never relieved 'till that State of the Urine is recover'd, which ſufficiently abounds with that Salt.

The Digeſtion of Ulcers in diabetical Perſons will continue no longer than their Urine continues ſalt. Moreover, I remember to have ſeen Iſſues that were made upon the Shoulders againſt ſcorbutic Palſies, that were continued for the ſpace of many Years without Danger; but when the Patient was at length ſeiz'd with a Diabetes, then the Iſſues ſpread wider every Day, as long as the Urine continu'd ſweet. And altho' the Spirit of Sal Ammoniac reſiſted the growing Evil better than any other Remedy, and render'd the Fibres of a brighter Colour, yet this always ſeem'd to me, as it were, to give Place ſlowly to the Enemy. For if the Force of the Diabetes was not broke by the Bark, nor any other Helps, and the Saltneſs of the Urine did not return, the Edges of the Iſſues uſed to mortify, and the Patient generally ſunk under the Diſ-

Diſeaſe; altho' the Surgeon, at the ſame time, omitted nothing that the greateſt Skill in the Art could ſuggeſt.

I was the more willing to relate this Caſe, becauſe when the Iſſues were upon the Shoulders there ſeems to be no other Cauſe to produce this Misfortune than the Diſeaſe alone. And how much the Salts of the Gall, rather than any others, conduce to form cutaneous Eruptions, appears from the Eryſipelas, and from more than one kind of ſcabby Eruptions, as alſo from certain furfuraceous Foulneſſes of the Skin, where the Matter with which the Puſtules are filled, is yellow, and deeply ting'd with Gall. And theſe Eruptions are cured, not by changing the ſaline State of the Blood, which is a very tedious and troubleſome Work, but by bringing away a greater Quantity of Gall from the Liver, by the Uſe of Purgatives. This plainly appears by Dr. *Friend*'s ſhort Treatiſe *De Excretione Inteſtinali.*

Therefore we ought to eſteem Salt neceſſary to preſerve the Tone of all the Parts, leſt whilſt they are continually acted upon by a certain propelling Force, they ſhould loſe their Power and Strength, and be enervated, and by their Weakneſs and Sluggiſhneſs give Riſe to Diſeaſes.

But I have not mention'd theſe Things that you ſhould think I uſe the *Sea-Water* in the Diabetes, for I never try'd it in this Diſeaſe; my Deſign was only to ſhow how much, in my

Opinion, a due Portion of Salt contributes to the Health of the Body. And indeed, that Salt is neceſſary to Health is plainly demonſtrated by what Phyſicians obſerve, that thoſe Perſons who uſe little or no Salt with their Food, or who are but little aſſiſted by that internal Salt, either that this is carry'd off by the Flux of Urine, or other Excretions; that ſuch Perſons do generally exhale a ſtrong and putrid Smell. And further, that in ſuch Perſons the Food generally continues longer in the Stomach and Inteſtines, and after Extraction of the Chyle a uſeleſs Load ſeems to remain and oppreſs the Fibres.

And what great Benefit Sea-Salt is to thoſe Animals that eat it with their Paſture, will eaſily appear upon a ſlight View. A large Quantity of Salt, taken in this manner, preſerves Sheep free from the Diſtemper which the Shepherds call the Rot, which Diſeaſe is often produc'd by wet and rich Paſtures, that are not ſeaſoned with Salt: And Examples of this Kind are well known, and very common in this Country.

For if you drive Sheep that are very ſound into moiſt Paſtures, that are ſubject to the Overflowing of Rivers, and the damp Vapours of the *Spring* and *Autumn*, theſe Symptoms generally follow. At firſt the Sheep grows ſuddenly very fat and briſk, but ſoon after grows dull and heavy-ey'd; ſoon after a vaſt Number of Animalcules breed in the Paſſage of the Gall; then the Liver is tainted and filled with innumerable

merable Tubercles and watery Veſicles; then livid and ſcorbutic Spots ariſe in the Skin; then the Wool is eaſily pluck'd off, or rather falls off. In theſe Circumſtances they call it the *Dry Rot*. But when theſe watry Veſicles are burſt, and the Water is collected in the Abdomen, it is then called the *Wet Rot*. But if you drive Sheep to feed in thoſe Places that are waſh'd by every Tide of the Sea, and are therefore ſalt, then you will find the Rot, and all thoſe Symptoms, ſuppreſs'd by Sea-Salt, ſo that there will be no Animalcules in theſe Sheep, but they will rather be ſound and healthful for a long Time.

I will alſo add, that when Horſes are affected with ſcorbutic Eruptions, and the Horſe Doctors have try'd all Means in vain, they often ſend the Horſes in this Extremity to the Salt Marſhes, by which the Diſeaſe is generally cured.

And theſe are the Remarks, moſt learned Sir, which I intended to impart to you concerning my Method, and the Uſe of Salt, beſides thoſe I have taken Notice of elſewhere, which, if your penetrating Judgment ſhall approve, I ſhall be extreamly pleaſed, and ſhall not repent that I have undertaken the difficult Taſk of writing. *I am*, &c.

A Letter from Dr. LEWIS *to Dr.* RUSSEL.

Dear Sir,

AT length I perform my Promiſe, in ſending you this Letter, but I am afraid it

will not anſwer your Expectations, as it contains no ſtudied Thoughts, nor any lucky Invention, nor any Fruits of a penetrating Judgment; I only ſend you an Account of two Caſes in Phyſic that are faithfully related, tho' in a plain and artleſs Manner. Whatever Reception it may find it will be a great Pleaſure to me to have ſatisfied your Requeſt, and to prove by this Inſtance how ready I ſhall always be to obey your Commands.

CASE I.

A Man thirty Years old, of a phlegmatic Conſtitution, and of a lax and ſpungy Habit of Body, after drinking large Quantities of Liquor, to which he had been too long accuſtom'd, fell into a ſudden and violent Pain, about the *Pit of the Stomach*; it extended alſo over all his Back, as far as his Shoulder-Bones, which would not permit him to breath, to walk, nor to ſtand upright. He had a foul Taſte of Bitterneſs in his Mouth, with a Nauſea, and continual caſting up of Gall. The Apothecary was preſently ſent for, who order'd him to loſe a large Quantity of Blood, and to take a gentle Purge to give him two or three Stools. This greatly relieved his Pain, and the Patient, for ſome Time, thought he had eſcap'd all Danger; when he ſoon found his Hopes deceitful, for the Symptoms return'd again with more evident Tokens of a Jaundice. His whole Skin was yellow, but chiefly

chiefly in the Whites of the Eyes, and about the Temples: Both his Body and Mind was affected with a great Sluggiſhneſs, and his Strength failed him remarkably; he had a Difficulty of Breathing; his Fæces were few, white, and ſomewhat viſcous; his Urine was ſo red and thick, that it came near to Blackneſs, and inſtead of the foremention'd Pain, he had a troubleſome Weight, in the right Side, under the falſe Ribs, but without any Hardneſs, or any viſible Tumor. I was preſently ſent for, and conſider'd all the Circumſtances as carefully as I could, and becauſe there was no Sign of a Fever, or an Inflammation, I thought the Intentions of Cure were only to diſperſe the Obſtructions in the Paſſages of the Gall, which ſeem'd to be obſtructed with a viſcid and chalky Matter; and by this Method the Gall would obtain a freer Courſe into the Inteſtines. Therefore I immediately order'd a Clyſter, and about the Middle of the Night gave him a Bolus, containing about fifteen Grains of Calomel, and after a purging Potion of the Infuſion of Senna join'd with Manna, and *Glauber*'s Salt, both which were repeated three times every third or fourth Day, as the Strength of the Patient would bear it. Beſides which he took Vomits; and that every Day might be employ'd towards a Cure, I adviſed him on thoſe Days he did not purge, to take twice a Day five or ſix of the following Pills, drinking after them four Spoonfuls of the ſaline Mixture.

℞ *Of* Caſtile *Soap three Drams, Woodlice prepared one Dram, Syrup of Saffron, enough to make it into moderate Pills.*

℞ *Of Salt of Wormwood four Scruples, Diuretic Salt one Dram, Juice of Lemons freſh ſqueezed two Ounces. When the Fermentation is over, add ſimple Milk-water four Ounces, Water of Nutmeg and Syrup of Saffron of each one Ounce. Mix it.*

By exactly perſiſting in the Courſe of Medicines the Diſeaſe ſeem'd to give way a little, yet it continued and with great Obſtinacy; for tho' the Skin came ſomething nearer to its natural Complexion, yet it was ting'd with Yellowneſs, and the Pain ſtill remain'd fix'd; but, which was of greater Conſequence, he began to loſe his Appetite and his Strength entirely. Having ſeriouſly conſider'd all theſe Circumſtances, I reſolved to try the Power of *Sea Water*, which has a Stimulus ſharp enough to purge the Belly effectually, and to cleanſe the Paſſages of the Gall, and does not hurt the Stomach nor weaken the Patient, but rather augments both the Strength and Appetite: For *Sea Water*, or which amounts to the ſame, *Salt Water*, was frequently uſed by *Aſclepiades* heretofore in the Jaundice, as *Celſus* relates in the 24th Chapter of the 3d Book; and now again it is uſed with the greateſt Succeſs, moſt accompliſh'd Sir, by your Perſuaſion, in opening Obſtructions of the Glands. I therefore order'd the Patient to drink half a Pint of this Water warm every Morning

as

as ſoon as he roſe. And that I might add ſomething of a ponderous ſoapy Medicine to this ſaline Stimulus, I preſcrib'd the following Electuary, to be taken every Day at four in the Afternoon, and at going to Reſt.

℞ *Of Conſerve of Orange Peel one Ounce, Cinnabar of Antimony prepared, and* Caſtile *Soap, of each half an Ounce, Woodlice prepared three Drams, Powder of Saffron half a Dram, Syrup of Orange-Peels, enough to make an Electuary.*

This Method of Cure being follow'd for four or five Days, ſoon produced a Change for the better; the foul and Jaundiced Hue of the whole Habit began by Degrees to diſappear, his Appetite and Strength return'd, that very troubleſome Senſe of Weight which he almoſt continually felt on his right Side went away entirely, after diſcharging by Stool a vaſt Quantity of viſcid and bilious Matter; and to be ſhort, he was happily reſtor'd to his former perfect Health in three Weeks.

CASE II.

A Beautiful and amiable young Lady, ſcarcely enter'd into her nineteenth Year, having hitherto always enjoy'd a perfect State of Health, by an accidental Fall ſtruck her left Leg againſt a Stone, but only ſo as to raze the Skin. This ſeem'd to be a ſlight Hurt, and perhaps in a thouſand others leſs beautiful, and of a more healthy Conſtitution, it would certainly have proved of no Conſequence; but the

Blood that nouriſh'd this moſt lovely Form was infected with a ſcorbutic if not a ſtrumous Taint, which from this ſlight Cauſe, as from a Spark, broke out ſoon after into a moſt dreadful Fire. This ſlight Wound was at firſt neglected and look'd upon as nothing, 'till the Skin ſeem'd to be inflam'd and diſtended round about it. Bleeding was ſoon adminiſter'd and repeated three times, cooling Purges were given, and Emulſions prepar'd with Nitre, and all the Medicines that could appeaſe the violent Emotion of the Blood; and outward Remedies were applied of a mollifying and diſcuſſing Quality, under the Care of a very ſkilful Surgeon, but all in vain, the Evil encreaſed every Day, and the Inflammation now tended towards a Suppuration: Therefore, that the Bone underneath ſhould get no Damage, as ſoon as the Pus began to generate, the Abſceſs was open'd by the Help of a Cauſtic, and all poſſible Means uſed to cure the Wound: But tho' it was now ſeven Weeks from the Time the Accident happen'd, there was yet no Appearance of healing the Sore: The Wound was foul, and the ſuperincumbent Fleſh ſoft and fungous, the Edges were inverted, and inſtead of a white, ſmooth and even Pus it continually diſcharg'd a thin, fœtid and bloody Ichor. Nor was the Cauſe of theſe dreadful Symptoms long concealed, for upon a careful Examination of the Ulcer by the Help of a Probe, the Bone was found to be ſtript of its Mem-

Membrane, the Bone itſelf being uneven, rough, and carious; therefore it was neceſſary to enlarge the Wound, and to make Inciſions in the affected Part quite to the Bone, to cleanſe it, and to do every thing to promote an Exfoliation, or ſcaling of the Bone. Nor was it neglected, at the ſame Time to give the beſt internal Medicines, which might temper the ſharp viſcid Humours, and render them fluid, or carry them off by gentle Purgations; for very ſmall Doſes of Calomel repeated at proper Intervals, and Boluſes compoſed of crude Antimony, Æthiops Mineral, and the like Medicines, with Diet Drinks prepared of Lime-water, varied as the Caſe of the Patient ſeem'd to require, and ſometimes mild Emetics were employ'd to make a Revulſion; but for fear of a Hectic Fever recourſe was had to Aſſes Milk and Teſtaceous Powders, to be taken twice a Day; but I ſhould tire you to relate all the Means uſed for the Recovery of this moſt lovely Lady.

In theſe unhappy Circumſtances the Lady was confin'd at home, without reſting Night or Day; for ſhe had loſt all the Comforts of Life, being deprived of her Companions, and no longer follow'd by a Crowd of Admirers, but left alone to mourn her unhappy Fate. And though ſhe was grown thin and pale, and almoſt killed with Grief and want of Sleep, yet ſtill the Charms of her Perſon remained unconquer'd by the Injuries and Power of the Diſeaſe.

Eight Months were now almoſt paſt ſince the Patient had labour'd under this Diſorder in ſpite of all the Aſſiſtance of Phyſic. There appear'd as yet no Hope of Recovery, no Signs that the Bone would ſcale.

It was often queſtion'd whether the *Bark* would be of any Service, or whether a ſlight Salivation might not diſpoſe the Humours to a better State? But as one was rejected on Account of the Patient's ſtrength being greatly impair'd, and her being alſo inclinable to a Diarrhœa, ſo the other gave little Hopes of effecting a Separation of the Bone, tho' perhaps it might have given her more Strength, and might alſo have relieved the Hectic Fever.

There remain'd yet one Help untry'd, and that, alas, was the only one, *Sea-Water*, the Power of which in curing ſcorbutic, and chiefly ſcrophulous Ulcers hath often been try'd by our beſt Surgeons; therefore the unfortunate Maid was carry'd to the Town of *Newport* in the *Iſle of Wight*, which was not far from the Place of her Abode, and there directly laying aſide all other Medicines but Aſſes Milk, ſhe drank *Sea-Water* in the uſual Manner, which at firſt occaſion'd a Nauſea and Thirſt, as it commonly does; but theſe Inconveniencies ſoon vaniſh'd, in two or three Days. This purg'd her at leaſt thrice a Day; nor did ſhe perceive her Strength or Appetite impair'd by repeating this Purgation, but rather daily improved. Growing cheerful upon this,

this, and bolder with the Hope of recovering her Health, ſhe dipp'd herſelf in the Sea, firſt only twice a Week, then three Times, and at laſt every Day; and always after bathing in the Sea return'd home with more Strength and Spirits. But not to detain you any longer by Particulars, after four Weeks reſolutely ſpent in drinking and bathing, the Appearance of the Ulcer was chang'd for the better, the thin, fœtid, ſanious Matter that daily flow'd from it in large Quantities, now was turn'd to a white thick Pus, without any Smell, and not in ſuch Quantity as before; the Edges appear'd ſoft, even and depreſs'd, and at length, by good Fortune, the corrupted Part of the Bone, which began to ſhake upon the Touch of the Probe, was entirely ſeparated from the ſound Part. From that Time all Things went on ſucceſsfully; the Cavity of the Ulcer ſeem'd to decreaſe more and more every Day, the white bluiſh Edges growing cloſer together, and drying up, and at laſt, in three Weeks more, was cover'd with a firm Scar.

The young Lady being ſenſible of her returning Health, uſed to appear publickly every Day, and go into Company, and enjoy the Pleaſures of her former Life: And though ſhe was confin'd almoſt a whole Year by a grievous Diſeaſe, in a languiſhing Condition, which could not be worſe unleſs ſhe had been entirely confin'd to her Bed; yet upon recovering her

Strength, her charms ſhone forth with a new Bloom of Youth; and I may ſay ſhe roſe from the Sea like *Venus* adorned with the utmoſt Graces and Beauty.

This is what I have to communicate to you at preſent, moſt accompliſh'd Sir, and will not detain you any longer; for I ſhould think myſelf unjuſt to Mankind if, by theſe Trifles, I ſhould take up any more of your precious Time, which is ſo happily employed in the Service of the Diſeaſed. Continue to give Health to ſuffering Mortals; and continue to improve our Art with your Genius, to illuſtrate it with your Writings and to ſupport it with the Fame of your Reputation; in the mean Time, pardon my Boldneſs in venturing to ſay any Thing of Medical Matters before ſo great a Judge.

Farewell worthy Sir, and condeſcend to receive me into the Number of your Friends, who ſhall always have the greateſt Reſpect and Eſteem for your Merit, I am *&c.*

Chriſt-Church, Oxford, March 1, 1749.

Dr. Russel's *Anſwer to* Dr. Lewis.

Moſt accompliſh'd Sir,

I readily ſend you the Caſe of a *ſcrophulous Caries of the Leg*, which I intended to add to the ſeveral Caſes before collected; but how it came to be omitted I cannot recollect. I was willing to give this alſo into your Hands, that you might know what this Method will effect

in

in a Hectic Fever, ariſing from morbid Glands, when the purulent Matter is ejected by Spitting. Indeed an Exfoliation ſeems to be aſſiſted by a Derivation of the Humours from the Part affected; for thus the Bones are not ſo much moiſten'd by a conſtant Flux of watry Humours, and the drier they are, ſo much the eaſier do they ſcale.

A Lad about twelve Years old (whoſe Brother is mentioned in the *31ſt Caſe*) was reduced to the laſt Extremity by a Hectic Fever; he had a Cough and Night Sweats, with a Difficulty of Breathing upon walking; he had a foul and purulent Spitting; the Glands of his Neck were morbid and hard; and there was an Impoſthume upon each Leg, with a Caries or Rotteneſs of each Fibula, (the ſmaller Bone of the Leg) near the Heel. This Boy, when he firſt drank the *Sea-Water*, was waſted to a ſurprizing Degree; but when he had uſed it ſix Weeks the hectic Fever abated, the Cough and Night Sweats went off, and no freſh Tumors roſe. While he continued drinking *Sea-Water*, the Bones of his Legs ſcaled, and the Tumors of the Glands were entirely diſperſed. In ſix Months he grew well, and from that Time he has had no Sign of a Relapſe.

Will you alſo give me leave to declare my Sentiments upon the general Cauſe of morbid Glands, I know you will eaſily grant it me, and I take the Liberty which your Candour affords me.

It appears to me that Parents moſt commonly have

have Children that are like themſelves in Conſtitution. The Children of thoſe Parents that are of a lax Habit of Body, are alſo weak and infirm, whence it happens that the Glands are ſubject to the ſame Fluxions that I ſuppoſe are in their Parents. And therefore I do not think the King's-Evil ariſes ſo much from a certain Infection, or hereditary Taint, as from a weak and bad Tone of the whole Syſtem of the Glands. And this ſeems to me to be the Fact; but as this is meerly a *Theory*, if others are of a different Opinion, I do not ſet ſo great a Value upon my own as to contend ſtifly about the Matter. But this is certain beyond all Controverſy, that the Glands, by Reaſon of their looſe and weak Texture, are more ſubject than other Parts to repeated Attacks of the Diſeaſe; not to ſay that many of them ſometimes ſeem to be quite incurable. Moreover, when there is a Redundance of any thing in the Body, which hath been a long time diſcharg'd by this or that Paſſage, by the Aid of ſome Secretion, which by cuſtom, is made as it were a Law, then it is evident that there is neceſſarily a Decreaſe of the Secretions of the other Glands, which threatens ſome Danger to thoſe Parts. Whence in ſome Leproſies, both dry and moiſt, which I could never cure by *Sea-Water* or any other Medicines, I obſerved that the Patients, for the moſt part, while the Diſeaſe is thrown out by the Skin, had a leſs Flux of Urine (like thoſe who are inclin'd to

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a Dropſy) and that all other Secretions had not their uſual Freedom. And indeed in theſe moſt ſevere Diſorders of the Skin, there is ſometimes not the leaſt Hope of a perfect and eſtabliſh'd Cure: For the Evacuation which has continued ſo long by theſe Paſſages, having broken, or very much weakened the Tone of the Part, upon the firſt Plenitude that happens the Diſeaſe flows again the ſame Way; as in a Gonorrhœa, where the Glands are changed from certain other Cauſes. But if we do but rightly touch upon the Hiſtory of Leproſies, I think it will eaſily appear, that the cutaneous Glands were not deſtin'd for ſuch a conſiderable Work as is requir'd for carrying off theſe Diſeaſes. They ſeem plainly to me to be formed for Aſſiſtances, which, whenever the other Secretions are by Accident obſtructed, might adminiſter their Help, and having performed that Office, they ought to return to their natural Form by their own Elaſticity, and be entirely reſtored; for whatever Part of the Body is a long time more diſtended than the Laws of Nature permit, is evidently morbid, and liable to Obſtructions and Tumors, and ſuch like Diſorders: And that the warmer Countries are more infeſted with theſe Diſorders than the Cold, there can be no room to doubt, if we give Credit to Authors, who deſcribe the Northern Leproſy as being leſs virulent, nor accompanied by ſuch Variety of Miſeries as the *Leproſy*, or *Elephantiaſis* of the *Greeks*, which, tho' it is quite unknown in *Europe*, yet where the

the Fluids are more attenuated by the Heats of the Sun, and the Evacuation by the Skin is more copious, as in *Egypt*, it is common, and the Veſſels of the Skin being at length obſtructed, it riſes to a greater Height. And indeed this Diſeaſe rages to that Degree in theſe Places, if we believe *Proſper Alpinus*, who lived a long time in the great and famous City of *Egypt*, formerly called *Memphis*, and now *Cairo*, that a great Part of the People labour under the *Elephantiaſis* of the *Greeks*, which is the moſt obſtinate Kind of Leproſy. But you may conſult the Author's Book *De Medicina Ægyptiorum*, p. 25. where he ſays, *There goes about another* Elephantiaſis *as was mentioned before; thoſe who are ſeized with it have their Feet tumid, big and miſhapen, with many great and hard Tumors, very much reſembling the Feet of Elephants, joined with ſwelled Legs and Thighs; in which, however, the Patient feels no Pain, but is only hindered in walking. I have ſeen many of them who went with wooden Caſes upon their Feet inſtead of Shoes, and who crept along very ſlowly, and with much Difficulty. This Diſeaſe is common at* Cairo. Does any thing like this happen amongſt us? Nothing ſure that is general and common. And the ſame Author ſays, *The Leproſy and Elephantiaſis of the* Greeks *is always found upon many poor People.* I ſee no Reaſon to think *Alpinus* miſtaken in his Account of this Diſeaſe: As it was daily before his Eyes, and he muſt have read the Deſcription of it

it in ſeveral Authors; and alſo that of *Aretæus*, who deſcribes it moſt elegantly; eſpecially as he was verſed in the politer Parts of Learning as well as in the Science of Phyſic.

Being lead by theſe Arguments, I judge that when we fail of Succeſs in theſe Diſeaſes, we are not to lay the Blame upon the Fault of the Medicine, but upon the Texture of the Solids, which are not only weaken'd but deſtroy'd by the Length of the Diſeaſe; for which Reaſon, I have no ſure and certain Hope of a Cure but in recent Fluxions; altho' this Method of Cure often anſwers even in thoſe inveterate Caſes. But the ſkilful Phyſician will ſometimes judge that this is not to be undertaken by any Means.

I have lately undertaken to cure, for the firſt Time, a Boy troubled with the *American Evil*. His whole Head is covered with a kind of Tumors like Muſhrooms of a dark brown Colour: His Neck is full of hard ſcrophulous Glands. The Diſeaſe is called the *Yaws* by the People in *America*. The Cure has hitherto baffled all Endeavours of the Phyſicians at *Jamaica* and here alſo; but becauſe the Medicines I have uſed but a ſhort Time, have a good Effect, I have Hopes of performing the Cure. But you ſhall be acquainted hereafter with the Succeſs of this uncommon Caſe, and indeed it is entirely new. It is not long ſince my Friend Dr. *Wilmot*, with his uſual Courteſy, hath kindly communicated to me ſome Extracts from *Scribonius Largus* which relate to my Method, by which it

appears,

appears, that *Scribonius* made uſe of *Sea Water*, to diſperſe Tumors of the parotid Glands behind the Ears, before they had ſuppurated. He ſays, *Having dipp'd new Sponges in hot* Sea-water, *and wrung them in a Linen Cloth, let the Parotides be fomented with this Medicine, and afterwards covered over with ſulphurated Wool.* See *Scribon. Larg.* Chap. 6. Then in the 41ſt Chapter, where he ſpeaks of both Kinds of the Gout, the hot and cold, we find the following Words, *When the firſt Violence of the Fit is over, both in this and the former Kind of the Gout, the Parts are to be long fomented with warm* Sea-water: *But if this cannot be had, put Salt into hot Water, and afterwards uſe the Epithem before preſcribed; for it carries off the Remains by Perſpiration, and ſtrengthens the Nerves for the future, and prevents their being eaſily vitiated.* It is certain, that *Sea Water* is a very powerful diſcutient, and I am perſuaded that this Quality is chiefly owing to its Sulphur and Bitumen. *Bolducius*, writing on the *Bourbon Waters*, thinks they contain a mineral Sulphur, or rather Bitumen, which is communicated to them by the Sea-Salt, which is evidently found in theſe Waters, (for Sea-Salt always contains more or leſs Bitumen) and which the Alcalies that abound in theſe Waters, preſerve in a fluid State. In the ſame Place he gives a Method of ſeparating them. The ſeparation of theſe Alcalies is performed by Spirits of Wine infuſed in the loweſt Parts of the Water, in which there

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is the greateſt Quantity of theſe Subſtances. The Alcalies ſink to the Bottom, and the Bitumen, being ſeparated, aſcends in Drops to the Surface of the Water, or cleaves to the Sides of the Veſſel. *See the Hiſtory of the Royal Academy of Sciences*, Anno 1729, p. 33, 34.

This does not only confirm, that the *Sea-water* contains a pretty large Quantity of Bitumen, but likewiſe ſhews us, in ſome manner, what we are to expect from its Aſſiſtance.

But I cannot help acknowledging, moſt accompliſh'd Sir, that the Purſuit of theſe Enquiries has afforded me a deal of Pleaſure, both becauſe it has made me acquainted with Perſons of the greateſt Character; and becauſe it has excited me, tho' now grown old, carefully to ſearch into the Writings of the Ancients, which, being entirely engag'd in Practice, I had for a long Time almoſt quite neglected.

I deſire you to return Thanks in my Name to thoſe kind Gentlemen, *Joſ. Kane*, and *William Holwell*, who took the Pains to correct the Preſs in your Abſence, which Favour I ſhall always gratefully acknowledge.

I received your two Caſes, which are wrote with your uſual Elegance, and thank you for not deferring to ſend them, and would have returned the Obligation, as well as I could, by the Caſe of a Caries on the Shin-Bone, cured by *Sea Water*, if I had not received it too late to be inſerted in this Edition. Improve in Virtue, moſt friendly Sir, and go on to cultivate

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the Art of *Healing*, which you have undertaken, and raiſe it to the higheſt Degree of Perfection; * *and may you always keep in View that Mortality which you are ſure of eſcaping by this ſingle Monument.* I repeat my Wiſhes for your Welfare, and that you may always continue your Friendſhip for him who will always bear you the greateſt Affection. *I am*, &c.

A Letter from Dr. RUSSEL *to Dr.* LEE.

NOT long ſince, I ſent you, moſt accompliſh'd Sir, a Letter concerning the Uſe the Ancients made of *Sea Water*; and I muſt aſk Pardon for interrupting that Leiſure which you ſo worthily enjoy after your honourable Employment; but at that Time, I could not recollect where I had thoſe Extracts from the Ancients, nor diſpoſe them in proper Order; ſo I was wholly taken up with the Care of our common Employment; therefore, I requeſt you once again to conſider this Matter.

I think it would be Labour in vain to endeavour to trace this Part of Phyſic higher than the Age of *Hippocrates*; as the Art of Phyſic was leſs cultivated in that Space of Time, that falls between the *Trojan* and the *Peloponeſian* Wars; and if you believe *Pliny* †, it was entirely neglected. But at length, we read, that *Hippocrates* who is properly ſtiled the

* *Pliny*'s Epiſtles, Book XI. 10.
† *Pliny*'s Nat. Hiſt. Lib. 29. Cap. 1.

the Father, and the Prince of Phyſicians in his Book of * Epidemic Diſeaſes, gave Sea-Water for a Clyſter; which plainly proves, that *Hippocrates* was acquainted with this Medicine; and in his Diſſertation on Air, Water, and Places, he ſpeaks much of certain Waters, which he calls Salt, and affirms, that they do not agree with all Diſtempers and Conſtitutions; but he ſays, nevertheleſs, that there are ſome Diſtempers and Conſtitutions in which this Water may be conveniently taken.

Then from the Age of *Hippocrates*, till the Time that *Pompey* ſubdued *Mithridates*, King of *Pontus*, the *Grecian* Art of Phyſic was little cultivated at *Rome*; but the Fame thereof reviving about that Time, *Archagathus* and *Aſclepiades* carried it to *Rome*, and being cultivated there by their Diſciples, the expiring Art was in a Manner reſtored to Life; then alſo, under the ſame Maſters, the Uſe of *Sea-Water* for purging ſoon grew common; and unleſs I am miſtaken, they made very great Uſe of this Medicine, as often as they thought any Thing more gentle than Hellebore, and the like ſtrong Medicines neceſſary. For according to † *Celſus Aſclepiades* who was the ſecond that flouriſh'd after the Revival of Phyſic at *Rome*, although he uſed to cenſure all Purgatives as hurtful to the Stomach; yet in Fact, acknowledged their Uſefulneſs; for he ſtill retain'd them in his Practice, and uſed to

* *Hippocrat.* Epidem. † *Celſus* Book III. Cap. 24.

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* *Hippocrat.* Epidem. † *Celſus* Book III. Cap. 24.

give

give *Salt Water two Days together for a Purgative*; alſo the ſame *Celſus*, who was the next after *Themiſon*, writing on Purgatives, ſhews there were two Kinds of Salt Water in Uſe amongſt the Antients, both which were given to looſen the Belly; one of theſe, I mean, *Sea-Water*, Nature eaſily ſuggeſted; the other, which uſed to be made with *Salt*, was ſubſtituted in its ſtead by the Art of Phyſic; and he informs us alſo, that *Sea-Water* is a ſharper Medicine, and that a Medicine purges more briſkly the ſharper it is; and it plainly proves, that this Medicine was not entirely neglected, and as it were baniſhed by *Aſclepiades*, in as much as he invented the Wine, call'd *Tethalaſſomenon*, which is a milder Compoſition of *Sea-Water*; and this we learn alſo from * *Cælius Aurelianus*, who writes, that *Aſclepiades* us'd to give Wine join'd with Salt, in the Diſtemper called the *Cardiac Paſſion*; but in deſcribing this early State of the *Grecian* Phyſic at *Rome*, it would be the greateſt, and almoſt unpardonable Negligence to paſs by the Name of † *Aretæus*; who (if you except one) was far the beſt Writer of the *Greek* Phyſicians; and indeed, he mentions *Sea-Water* twice or thrice in his Books; and propoſes the Drinking of it in one Place, and in another mentions in a Letter, ſomething worthy of Notice concerning its great Virtue

* *Cælius Aurelianus*, B. II. C. 39. † *Aretæus*, B. I. C. 15. of Chronic Diſeaſes; and B. I. C. 8. of Acute Diſeaſes; and B. II. C. 1. of Acute Diſeaſes.

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in drying up Ulcers; and this Property of Sea-Water is proved by modern Experience, for our Surgeons have experienced its Power of healing in ſcrophulous Ulcers of the Joints of the Wriſt and Ankles, and the ſame is fully ſhewn in the ſeveral Examples mentioned in my Diſſertation.

But let us paſs over to the ſubſequent State of this Medicament. *Cornelius Celſus*, who is ſaid to have flouriſh'd under the Reign of *Tiberius*, teſtifies, that *Themiſon*, who beſides many others, was of the School of *Aſclepiades*, preſcrib'd Brine in a Dyſentery; and † *Pliny*, alſo writes, *Brine is uſeful in Dyſenteries, even where there are* Nomæ *or creeping Ulcers of the Inteſtines: As alſo in ſciatic Caſes, and to thoſe who are affected with an inveterate cæliac Paſſion. In the inland Countries it is us'd for Fomentations inſtead of Sea Water.*

From hence, it plainly appears, that this Salt Medicament was not uſed only in the Dyſentery, but even in thoſe Caſes where the Inteſtines were affected with *Nomæ*, or eating and creeping Ulcers; by which Word *Pliny*, in many Places, tranſlates and expreſſes the *Herpetas* of *Dioſcorides*.

It is evident therefore, from the foregoing Obſervations, that *Sea-Water* was a Part of the *Materia Medica*, from the Time of *Mithridates*'s Defeat to the Age of *Tiberius Cæſar*; and then thoſe two Writers, *Pliny* and *Dioſcorides* (who liv'd much about the Times of *Nero* and *Veſpaſian*) tranſcrib'd many Things from the antient Phyſici-

† *Pliny*, Book XXXI. Chap. 8.

ans into their own Works; both which left to Poſterity whole Chapters, wrote upon this Medicament; but I ſhall only add one or two Remarks of *Pliny* on this Subject, becauſe you will find many Things from this Author mentioned before in my Diſſertation; but I would have you take Notice, that I do not remember to have mention'd that the extraordinary Power of Salt in evacuating the Lymphatic Veſſels, when they are diſtended by drinking large Quantities of any medicinal Waters, did not eſcape the nice Obſervation of the Ancients; for the ſame * *Pliny* teſtifies, *that he had ſeen ſome Perſons ſwelled to that Degree with drinking, that their Skins were covered with Rings, when the vaſt Quantity of Water they had drank did not paſs off; and therefore, it is wrong to drink ſo much without the frequent Uſe of Salt.* Which Words of *Pliny* plainly ſhew, that Salt was given in thoſe Times to ſtimulate the Glands of the Inteſtines, that they might perform their Secretions more copiouſly, and that they might entirely ſuppreſs or relieve that Uneaſineſs which generally ſucceeds the drinking of too much Water. And as the Antients had obſerved, a Nauſea happened ſometimes after drinking *Sea-Water*, they thought it did not agree with, and was hurtful to the Stomach; but yet, they found by Experience, that its Salt helped Concoction, whetted the Appetite, and encreaſed the glandular Secretions; and for this Reaſon, they gave it their Cattle, and Flocks, for

* *Pliny*, Nat. Hiſt. Book XXXI. Chap. 6.

Pliny

† *Pliny* writes, *that Sheep and all Kinds of Cattle are greatly excited to feed by Salt, and this gives them more Milk, which makes the beſt Cheeſe.* But if any one would be further inform'd of the Nature of the Salt and Brine of the Ancients, he will find ſufficient Matter of Enquiry in the *Exercitationes in Solinum* of *Salmaſius*, and the *Definitiones Medicæ* of *Gerræus*.

But in the mean Time, I muſt deſcend a little lower to know the State of this Medicament at that Time, and let us ſee its Reputation in the Reigns of *Caracalla* and *Gordian*.

And about that Time, Q. *Serenus Samonicus* flouriſhed, he who was put to Death at the Command of *Caracalla*, and was reported to have collected 60,000 Volumes, or more, as ſome ſay; he was a remarkable Lover of Learning, and a noble Patron of the Learned; his Son was Preceptor to the Emperor *Gordian* the Second, but which of theſe wrote the Poem on Phyſic, has been long and much diſputed; I cannot decide the Debate, or if I could it would be nothing to my Purpoſe; for I think it will be ſufficient if I prove the Uſe of *Sea-Water* was common, and greatly praiſed by all thoſe who being acquainted with this moſt liberal Art, have mention'd it in their Writings.

We have ſeen that this Medicament continued in Uſe, from the Age of *Hippocrates*, to the Reign of *Caracalla*; and ‡ *Serenus Samonicus* teſtifies

† *Pliny's* Nat. Hiſt. Book XXXI. Cap. 6.
‡ Q. *Serenus Samonicus*, Cap. 5. *Idem*, Cap. 6, & 20.

that it was not us'd alone to cure thoſe Diſeaſes already mention'd, but was alſo given in many other Caſes; for he propoſes it againſt the Itch, and the *Phthiriaſis*, or louſy Diſeaſe; it was given alſo in ſome bilious Diſorders, and as a ſimple Purgative. In the ſame Place he deſcribes the *Thalaſſomeli*. *Pliny*, *Marcellus* and *Serenus*, do all with one Accord praiſe *Sea-Water* againſt tumefied Teſticles; for *Pliny* writes, † *that it is preferable to every Thing to foment tumefied Teſticles*; *and* Marcellus *ſays*, *let tumefied Teſticles be moderately fomented with Sea-Water*; and this led me to apply a Cataplaſm in this Caſe, made of Barley and Bean-Flour, boiled in Sea-Water, and join'd with *Unguentum Nutritum*, and I found it a very powerful Diſcutient.

Moreover ‡ *Samonicus* confirms, that it is beneficial in the Sciatica, in the Gout, where he deſcribes the *Vinum Tethalaſſomenon*, and alſo in Quartan Agues:

Prodeſt vel Potus, vel mulſus Doridis Humor.

But by the Word *Doris*, *Serenus* underſtands *Sea-Water*; uſing the ſame Word, by which *Virgil* expreſſes the Waters of the Sea in his tenth Eclogue; which is plain in this Place by the Addition of the Epithet *amara*, *bitter*, which is the diſtinguiſhing Quality of the Sea; and he was ſo happy in the Choice of Epithets, that by their Help, he could

† *Pliny*'s Nat. Hiſt. Book XXXI. Cap. 7.
‡ Q. *Serenus Samonicus*, Cap. 38.

explain

explain the Differences of Things, and their moſt ſecret Quality.

This is the Verſe of that divine Poet:

Doris amara ſuam non intermiſceat undam.

And the ſame † *Samonicus* ſhews, that *Bætic Salt* was given in the Piles, and in ſome Diſtempers of the Eyes.

Therefore, many Forms of preſcribing derived their Original, both from *Salt* and *Sea-Water*, in the flouriſhing State of ancient Phyſic.

And unleſs the Ancients had prov'd their great Virtue and Power by a long continued Practice, certainly theſe Medicaments would never have continued in Uſe, and grown more general for ſo many Ages as from the Time of *Hippocrates*, to the Reigns of *Caracalla* or *Gordian*; but if it was neceſſary, it would be both an eaſy and very entertaining Labour to extract almoſt an infinite Number of Preſcriptions from the Writings of the Antients.

But I ſubjoin a Plaſter of Salt (the *Greeks* call it ἁλῶν) which I find amongſt many others deſcrib'd by *Scribonius Largus*, and which he ſays is good to diſcuſs every Hardneſs; it is made thus:

‡ *Sea-ſalt, Ceruſs, old Oyl, of each equal Weights; the Ceruſs is boil'd with the Oyl till they unite, and afterwards the Salt is put in.*

This was us'd by the *Greeks*, and I think, it is plain enough, from what has been premiſed, that the Ancients uſed Salt in diſſolving hardiſh Tumors.

† *Q. Serenus Samonic.* Cap. 65. ‡ *Scrib. Larg.* Cap. 86.

Although I have already mentioned the Wine called *Tethalaſſomenon*, and the *Thalaſſomelite* and *Brine*, and other Forms of Medicaments, which I judge were derived from Sea-Water and Salt; yet there remains another ſaline Medicine preſerv'd by *Marcellus*, which I have not yet taken Notice of, for that Author ſays, that

† *Whey of Cows Milk mixed with Honey, and a due Quantity of Salt, being drank, is good to move the Belly when bound; and the like without Honey, is extant in* Hippocrates Latinus.

Thus I have reviewed, and as I think, ſufficiently explained to you the Uſe which the Ancients made of Sea-Water, as well in exonerating the Lymphatic Veſſels, as in diſperſing hardiſh Tumors, and againſt all Putrefaction; you will alſo readily allow that it was uſed in various Methods and Preſcriptions, to repreſs that Putrefaction of the Fibres, which we ſometimes find in the Scurvy, and ſome other ſevere Obſtructions. For * *Pliny* highly commends the Uſe of Salt againſt the Putrefaction of the Gums (which is always a great and in a Manner, an inſeparable Sign of the Scurvy) and thinks it a certain Method to preſerve the Teeth from Eroſion and Rottenneſs, to hold Salt under the Tongue every Morning faſting till it diſſolves; and a little lower, he enlarges in the Praiſe of Salt; *it aſtringes, dries, unites and even preſerves dead Bodies from Putrefaction, ſo that they endure for Ages.*

Therefore, after long and ſerious Conſideration of that ſcorbutic Putrefaction that uſually infeſts

† *Pliny*'s Nat. Hiſt. Book XXXI. Cap. 9.

Seamen

Seamen in long Voyages, I muſt conclude, that it is falſly and without any juſt Ground attributed to their ſalt Proviſions; and I think, I may truly affirm, that Salt does not only preſerve Meat from Corruption, but from the ſame Cauſe, it does alſo defend Sailors from that corrupt and morbid State; and I think you will be of my Opinion, if you reflect on the Strength and flouriſhing State of Health which poor Country People enjoy, who are employed in plowing, and other Labours of Agriculture, and who have ſuch ſtrong Nerves, that they are almoſt able to undergo the ſame Fatigue as their Cattle; and at the ſame Time live upon the ſame Food as Seamen; and indeed, have leſs Variety; for go which Way you will, you will find many in every Country, that have lived perhaps for the Space of 30 Years upon no freſh Meat, but ſalt Beef and Bacon, and various but ordinary Sorts of Pudding, unleſs perhaps, on ſome high Holiday, they buy a Bit of freſh Meat to feaſt withal, and think it Luxury; and yet theſe People are generally ſtronger, and have better Health, than thoſe who live in a better Manner, and indulge themſelves in Dainties and high Feeding.

Therefore, as the Rule and Method of Living of Seamen and poor Country People, differ only becauſe the former want the Help of Exerciſe, and are always ſurrounded by the Waters of the Sea; I judge, that the Principles and Cauſes of this Sea Diſtemper are to be more truly found elſewhere.

I think,

I think, it is generally allowed, there is ſomething born with, and as it were implanted in the Nature of land Animals, that they can by no Means bear a Life continually paſſed upon the Waters; as Fiſhes, and thoſe Kind of Animals that are called *amphibious*, and partake of both Natures, cannot be always depriv'd of that ſame Water, without the Loſs of Life. We ſee that the Inhabitants of muddy Fenns and Marſhes, and thoſe that live in low wet Grounds, ſurrounded with thick Woods, are ſubject to certain grievous Diſtempers about the Spring and Fall of the Leaf, which plainly ſhews us, how much the Nature of Man is hurt by continuing long in a damp Air, becauſe the Tone of the Fibres being thereby relaxed, ſuffers a great Weakneſs. † For about the Time of Spring and Autumn, the Sun has a Power of Heat ſufficient to raiſe a great Quantity of Exhalations from the Earth, but is not long enough above the Horizon to heat the Air, ſo as to raiſe them to a

† I am afraid the Author's Reaſons will not hold good in this Particular; for though the Laxity of the Fibres will certainly contribute to the Generation of ſome Diſeaſes, yet that is not merely the Cauſe of the Inſalubrity of low marſhy Countries. They certainly abound with Exhalations of a very malignant Nature; which drawn in by the Breath or entering the Pores of the Body, are the more immediate Parents of thoſe Diſeaſes to which the Inhabitants of thoſe Places are ſubject. Beſides the mordid Seaſons are not the Spring and Fall; for they often begin, not in the Spring, but in *July* and *Auguſt*, as I have found by Obſervation in the *Hundreds* of *Eſſex* And with Regard to the Sailors living on *Salt-Meats* it is very well known, that nothing is a more certain Cure for the Scurvy in long Voyages than a *Vegetable Diet*, and a Suſpenſion from living on the Ship's Proviſion. This is mention'd with all due Deference to the Author's Merit and ſubmitted to his Conſideration.

proper

proper Height, or to attenuate them ſo that they may be preſently diſperſed and carried off by the Winds; therefore, they are condenſed again, and being changed into Vapours and moiſt Fogs, they hang a little above the Earth, and in a Manner encloſe the Inhabitants. And hence, their Fibres are relaxed, and the Tone of the Solids is ſo broken and weakened, that they cannot compreſs nor ſubdue the Fluids with a proper Force; but that State of the Blood is produced that happens in intermitting Fevers; then by Degrees, the Perſon is infeſted with a ſcorbutic Putrefaction of the Gums, and at laſt, with ſcorbutic Spots, and tumefied Legs and Thighs; I have ſeen ſome Inſtances of Patients, who had the Tone of their Solids ſo violently broken, and the true State of the Blood ſo highly vitiated, that I have ſometimes ſeen the Blood iſſue plentifully at their Fingers Ends, which could not be ſtopt without great Difficulty; and I have many, and, as I think, great Reaſon to believe, that theſe Diſeaſes owe their Origin to a relaxed Tone of the Fibres.

Firſt, becauſe the Diſeaſe never rages ſo violently, nor riſes to ſuch a Height, but where the Force of the Solids was before broken by the long Continuance of the Diſorder; for Nature, a long Time oppoſes the growing Evil, but is conſtrained at laſt to yield.

Secondly, becauſe whenever the Patient is reduced to this Extremity, the Cure can never be effected without the Help of Aſtringents, ſuch as the Peruvian

Peruvian Bark, Winter's Bark, Acids and Vitriolic Medicines; or the ſtyptic Preparations of Steel, ſtyptic Wines and the like; alſo ſubacid, unripe Fruits, are found ſerviceable in ſcorbutic Diſorders for the ſame Reaſon; that is, becauſe they are aſtringent and deterſive:

And laſtly, becauſe it appears by conſtant Experience, that the Inhabitants of the Sea Coaſts where the Shore is clean, and is not foul'd by the Mud, or Filth of Havens, or Arms of the Sea, and where they are not ſurrounded with frequent Fogs and Vapours, they are leſs ſubject to intermitting Fevers and ſcorbutic Diſorders than thoſe who live in the Inland Countries, where the Land is low and wet, and full of Woods.

And thus, if the human Body continues long in a moiſt Air, which it muſt neceſſarily take in at every Reſpiration, and attract and abſorb'd by all the Pores of the Skin; or lives in fenny or woody Countries, we perceive the ſame Symptoms generated as are called ſcorbutic in Seamen; for the Perſpiration grows leſs by Degrees; then the Glands of the Skin, or rather the whole Syſtem of the Glands is a little affected; for as the Perſpiration is leſſened, they are loaded with a greater Burthen; and if we believe the *Italian Sanctorius*, there paſſes off by Perſpiration fifty Ounces in twenty-four Hours; but our Countryman Dr. *Keil*, thinks it to be only about thirty Ounces. But if this Perſpiration is obſtructed the Body muſt neceſſarily ſuffer for a Time, as it happens even upon taking

taking a ſlight Cold, where the Diſorder does not go off but by the Help of a warmer and drier Air, which increaſes the Perſpiration. But if the Obſtructions of all the Pores are increaſed, then the Seamen are deprived of this Help, as well as of Exerciſe; and hence it happens, that the Diſeaſe cannot ſometimes be reſtrain'd by the Power of Medicines 'till the Patients enjoy a drier Air. And the extreme Obſtinacy of this Diſeaſe, and what Relief may be had if the Seamen continue upon the Sea, may be proved by the Lord *Anſon*'s Voyage, and alſo by daily Experience; for they are ſooner and more eaſily recovered if they come aſhore, where the Air they breathe is better and drier.

The Reaſon of which is known to the People of *Norway*, and is obſerved by them in the Cure of the Scurvy; for as *Bartholinus* writes in his Treatiſe *De Medicina Danorum Domeſtica*, they do not gather Mulberries and carry them home to the Patients, but think it better to go to Places where they grow, and eat what Quantity they will, and ſtay upon the Place 'till the Scurvy diſappears.

I have thus laid before you, moſt accompliſhed Sir, almoſt every Thing that the Antients thought *Salt* and *Salt Water* could perform againſt Putrefaction, which perhaps ſome will think more, and others leſs, than the Nature of the Thing requir'd; but your Candour will eaſily pardon a Slip in ſuch a difficult Way, and which has been ſo little known,

But of what Weight are theſe Authorities of the Antients, and how little are they to be minded, if compared with the ſingular Uſe which you have found of this Medicine from your own Experience; or what are thoſe Teſtimonies of the Dead, if compared with the Examples of Thouſands now living who daily drink Sea-Water, who, if they had not found it very beneficial, would certainly have neglected it long ago?

I ſend you alſo an Account of a Cure lately performed. You will find there that the Patient was purged a long Time with Sea-Water, for ſhe drank it every Morning in a continued Courſe, 'till ſhe had taken twenty-five Gallons, a great Quantity indeed, and by this Means the ſcrophulous Diſorder with which ſhe was troubled by Degrees diſappeared, and her Health was in every Reſpect better eſtabliſhed than ever.

Theſe Arguments may ſuffice to remove all the Prejudices of thoſe who will hearken to Reaſon; for it ought to be inquired into, whether a Medicine is good in ſome Diſtempers or not? Nor is it ſo much the Buſineſs of a Phyſician to ſpend his Time in diſcovering the Sources, and obſcure and remote Cauſes of Diſeaſes, as to embrace whatever may conduce towards their Cure; and to think that † *Theſe Conjectures about the latent Cauſes of Things are of no Conſequence, becauſe it does not ſignify what occaſions a Diſeaſe, but what will cure it.*

I am, Sir, &c.

† *Celſ.* Pref. Lib. I.

ADVER-

ADVERTISEMENT

To the READER.

DR. SPEED, *the Author of the following Treatiſe, ſeems greatly afraid that the Apothecary, the Patient, and the Phyſician's Servants, ſhould become too knowing by its being tranſlated into* Engliſh. *Whom he means by the Phyſician's Servants diſtinct from the Apothecaries, I am at a Loſs to know. However, I am willing to believe, that the Doctor does not imagine all medical Learning is contained in this ſmall Commentary, or that he can forget the Apology of Sir* Richard Blackmore *and others, "That* Hippocrates *writ in his own native Tongue:" Beſides, as Apothecaries are generally conſulted firſt, I hope he has too much Concern for the Welfare of Mankind, not to ſet them in the right Road, and that if he will not allow them to do any Good, they may at leaſt do no Harm. However, I may venture to affirm that this Precaution is a little too ſanguine, for if this Pamphlet had never been tranſlated, there are many Apothecaries would have been able to read it in the original Language.*

A COMMENTARY ON SEA-WATER.

AS the Uſe of Sea-Water is grown into Faſhion, I thought it would not be improper for me to make Enquiries into its Nature: Eſpecially as many Patients flock down to *Hampſhire*, I determined to try Experiments on the Waters that waſh the Shores of that County.

EXPERIMENT I.

1. I procured half a Pound of Sea-Water from the South Side of the *Iſle of Wight*.

2. I got another half Pound from the Shore of *Southampton* at the Time of the *Spring-Tide*, which happens ſoon after the new and full Moons.

3. Like

3. Likewiſe another when the Moon was in the firſt and the laſt Quarter, that is, at the *Neap-Tide*. The Weight I made Uſe of was not that of the Apothecaries, but Averdupois, the half Pound containing eight Ounces. I evaporated each with a gentle Sand-Heat, and when the watry Particles were flown off, there remained behind two Drams * and eight Grains of that from the *Iſle of Wight*. That from *Southampton* at the Spring-Tide left the ſame Quantity; and that at the Neap-Tide two Drams and two Grains. In the Reflux of the Water there wanted ten Grains in that of *Southampton* at the Neap-Tide. However, it is proper to take Notice, that when the Tide is out there is not Water enough to bathe in, the Shore being left naked; but when the Tide is in, it is otherwiſe. Beſides the Place to be choſen for bathing is of no great Moment, provided a Pound of Water contains a little above an Ounce of Salt, which muſt be weighed while it is dry, and before it attracts the Moiſture of the Air.

The Maſs remaining after the Evaporation of the Sea-Water was of a whitiſh Yellow, and of a bitteriſh ſalt Taſte. Its Particles aſſumed no particular Figure, unleſs a few Grains at the Bottom, which ſeem'd to be cubical; for Sea-Water contains an earthy ſabulous Subſtance, which thoſe

* The Doctor ſhould have told us what Drams he means; but I ſuppoſe it muſt be Apothecary's Drams, as appears by what follows.

that make Salt call *Scum*, which hinders the Cryſtalliſation. Nor can the Salt be granulated before it is freed from this Subſtance. There is not above ſeven Grains of this in every Pound.

The Solution of the Remainder of this in Rain-Water, after the Fæces above-mentioned had been ſeparated by Filtration, was of yellowiſh Colour, and being placed in a very gentle Sand-heat, there appeared Cubes on the Surface, which being perfectly formed fell to the bottom. As the Evaporation went on, the Liquor Became gradually more yellow than it was before. And here it will be proper to obſerve, that though Salt-Water is ſo intimately mix'd with the Fæces, that they will both paſs through the Filtre together, yet the Caſe is otherwiſe after Evaporation, for then it will not unite ſo intimately with Water as it did before.

EXPERIMENT II.

When this yellow Liquor, which *Hoffman* calls the Lye of Salt, ceaſes to yield any more Cubes, the Surface by the Continuance of the Heat will begin to be covered with a white Cruſt; which being removed from the Sand, and ſet in a dry Place it ſhot into priſmatic Cryſtals, aſſiſted by the Heat of the Sun and Air in the Summer Time. Theſe Cryſtals being purified by a freſh Solution and Cryſtalliſation, they became the cathartic Salt of the Shops, commonly called *Epſom* Salt. *Hoffman* aſſert

aſſerts that this Salt is not to be made without the Addition of certain other Salts to the Lye *; but in this he is miſtaken, for Experiments ſhow the contrary.

There is nothing in Nature attracts the Air ſo much as this *Lixivium* of Salt, for if it be calcined to the Hardneſs of a Stone, and afterwards expoſed to the Air, it will readily melt. This Liquor, which contains *Epſom* Salt, being mix'd with Urine, and ſublimed after the Effervescence is over, will produce Sal Ammoniac, as ſome of the Makers of Salt affirm. ‡

When all the priſmatic Salt was taken out, which was about two Drams, there remained in the bottom a browniſh inſipid Fæces, with a very little inſipid Water, † void of all Bitterneſs. Therefore they ſeem to be in an Error who aſſert the Bitterneſs of the Sea-Water ariſes from Bitumen, unleſs there is any ſuch Thing as a bituminous Salt, which

* Obſ. Med. Chym. Pag. 198.

‡ Take of the Lixivium of Salt a Gallon; of Urine three Gallons; mix them, and let them ſtand in a Leaden Veſſel 48 Hours to ferment. Then evaporate to a Dryneſs, and ſublime what is left according to Art. This is the Method of making Sal-Ammoniac, as was communicated to me from the Salt-Works near *Newcaſtle*.

† Theſe inſipid Fæces and Water were obtained from Sea-Water which I evaporated myſelf, and which was deprived of all the common Salt. But the Remainder of other Lye, which I had from the Salt-works, had a ſaltiſh Taſte. For which Reaſon I conclude that the *third Salt*, which is ſaid to be in the Lye in the *Philoſophical Tranſactions*, is nothing elſe but common Salt, which being diſſolved runs together with the Lye, as is rightly deſcribed in the *Limington* Proceſs, No. 577.

thoſe whom it concerns may endeavour to find out.

EXPERIMENT III.

I ſuſpected that theſe Fæces were much of the Nature of Lime, and therefore I diſſolved Sal Gem. in Lime-Water; and I evaporated the Solution in a Sand-Heat: Towards the End the Liquor began to turn yellow like the former Lye, which is not the Caſe when the ſame Salt is diſſolved in pure Water. You may conſult Dr. *Grew*'s Treatiſe of the *bitter purging Salt*, which entirely agrees, as I have learnt by Experience, with the *bitter marine Salt*.

From what has been ſaid it appears that Sea-Water contains, 1. Common Salt, which all agree is drying, and, as *Hippocrates* affirms, renders the Body coſtive. "Thoſe Men are deceived and ig-"norant of the Nature of Salt Waters, who be-"lieve they are purging; for they have directly the "contrary Qualities; nor are they digeſtible while "they are crude, and rather bind the Body than "open it." *

This I imagine ſhould be underſtood of Waters that are ſaturated only with common Salt, as thoſe in *Cheſhire*, *Worceſterſhire*, and in ſeveral Parts beyond the Seas. Thoſe that live upon ſalted Meats

* De *Aer. Loc. & Aquis*, Cap. 16.

are

are generally coſtive, which perhaps would not be the Caſe if the Makers of Salt were not too careful in ſeparating the common Salt from the bitter Lye, which abounds with the purging Salt: For Fleſh Meat ſalted with Bay-Salt is not rendered ſo very hard, becauſe it has a Mixture of this bitter Salt.

2. Bitter Salt, whether diuretic or cathartic, is very good to open Obſtructions, as being the moſt penetrating of all Salts, except thoſe that are corroſive. Hence the Virtue of Sea-Water is principally derived, of purging both by Stool and Urine, as well as that of opening the Obſtructions of the Glands, I mean when taken inwardly.

I have often freed Boys from the Obſtructions of the Meſentery, by the Uſe of *Ens Veneris* or the Martial Flowers, with *Æthiops* Mineral, purging them now and then at proper Intervals with Calomel and Rhubarb; and no doubt others have done the ſame Thing. Now as Sal-Ammoniac is a principal Ingredient in the Martial Flowers, and if it contributes any Thing towards the Cure of theſe Diſorders, we muſt remember that it is made of Urine and the bitter Lye, which contains *Epſom* Salt. And whatever Virtue Sea-Plants may have when given as Medicines, Sal-Ammoniac has the ſame when united with Deobſtruents; for Inſtance, Cinnabar of Antimony. But then, if the Patient is of a cold Conſtitution, inſtead of giving crude Sal-Ammoniac, it will be beſt to ſubſtitute the

Martial Flowers; and if with either of theſe the diſeaſed Perſon has been purged between whiles, I have known the ſtrumous Swellings to diſappear ſooner than by drinking Sea-Water. This is no uncommon Practice, for the *Perſians* are not unacquainted with this Salt in the Cure of the King's-Evil, becauſe it enters internal Compoſitions intended againſt that Diſeaſe, as appears from their own Diſpenſatory, No. 20 and 126.

3. Both the *Fæces*, that is, the firſt that hinder the Cryſtalliſation of the Salt, and the ſecond which remain after the Cryſtalliſation of the purging Salt, ſeem to me to be of the ſame calcarious Nature.

The Uſe of Sea-Water is either external or internal. The external Uſe was well known to the Ancients, therefore let them ſpeak for themſelves. I ſhall begin with *Hippocrates*, who ſays, "that "Sea-Water is good for thoſe who are affected "with an Itching, and Eroſions [of the Skin] as "well by Bathing in it as by uſing it as a hot Fo-"mentation. But it is troubleſome to ſuch as are "not accuſtomed thereto. It is prejudicial to Ul-"cers proceeding from Burns and Abraſions of the "Skin, or the like. But it is proper for thoſe that "are clean, and to dry up, for Inſtance, the Ulcers "of Fiſhermen, for theſe will not ſuppurate un-"leſs they are handled roughly: As alſo for the "binding-up [of Fractures]. It appeaſes and ſtops

"eating

" eating Ulcers in the ſame Manner as Salt, Brine,
" and Nitre. For all theſe uſed ſparingly are hurt-
" ful, but freely beneficial. It is alſo good for
" many hot [Diſorders]."

Dioſcorides affirms, " that hot Sea-Water, uſed
" as a Fomentation, is attractive and diſcutient.
" It is good in Diſorders of the Nerves, and for
" Whitlows, before they are ulcerated. It may be
" properly mix'd with Barley Meal for Epithems,
" with Plaſters, and with diſcutient Cataplaſms.
" As a Fomentation it is beneficial in the Pſora,
" the Itch, Tetters, Freckles, and diſtended
" Breaſts; as alſo black and blue Marks. It is
" good for venomous Bites that induce Tremblings
" and Refrigerations, particularly thoſe of Scorpi-
" ons, Spiders and Aſps, when uſed as a hot Bath.
" As a Bath it is uſeful for thoſe that have long
" tedious Diſeaſes of the Body and Nerves. The
" hot Vapour of Sea-Water is uſeful in the Dropſy,
" Head-ach, and Hardneſs of hearing."

In his Treatiſe of *Theriaca* he commends Lo-
tions of Sea-Water for venomous Bites again and
again.

Galen ſays, " If you would apply Doſſils or Lint
" upon Ulcers, the moiſt ſhould be imbuted with
" potable Water, and the dry with Brine and Sea-
" Water." He likewiſe commends it againſt a
Gangrene, " When there is Blackneſs perceived
" [in an Eryſipelas] the Part muſt be ſcarified and

" a

" a Poultice laid thereon; it muſt likewiſe be often " bathed in hot Water, and ſometimes Sea-Water " will be convenient." *

Oribaſius from *Antyllus* has the following Obſervation. " Swimming in the Sea is proper for the " Dropſy, the Itch, and other Breakings-out on " the Skin, as alſo for the Elephantiaſis, and thoſe " who are afflicted with Defluxions on the Legs, " or other Parts of the Body. It is likewiſe uſeful " for thoſe who receive no Nouriſhment from " their Food, and are tormented with the " Epilepſy." ‡

* *Heiſter*, a Writer in Surgery of the firſt Claſs, in many Places adviſes a Mixture of Sea-Water or Brine, with diſcutient Cataplaſms and Fomentations.

The Ancients were very cautious in giving it internally, and *Dioſcorides* in the Place above-cited, acknowledges Sea-Water was given internally as a Purge by itſelf, or with Oxycrate, or Wine, or Honey; but then when it began to work, the Acrimony was to be mitigated with Chicken or Fiſh-Broth.

His Compoſition, which he calls *Thaſſomeli*, he directs to be made with equal Parts of Honey, Sea and Rain-Water, which is to be clarified, and then be

* Method. Medend. Lib 14. Cap. 3.

‡ Med. Collect. Lib 6. Cap. 27. In the Original it is *qui Morbo exagitantur*, which the Doctor takes to be the *Epilepſy*.

ſet

ſet in the Sun in a pitched Veſſel, during the Dog-Days. He likewiſe recommends Wine * made with Sea-Water to purge the Body, to help thoſe that ſpit purulent Matter, and thoſe that are coſtive: As alſo to relieve thoſe who have Diſorders in the Head from drinking *Armenian* Wine. But then it is an Enemy to the Stomach, and generates Wind, as the ſame Author affirms. In the firſt Book *de Parabilibus*, if *Dioſcorides* is the Author, he affirms that Sea-Water drank with Oxymel will break internal Abſceſſes.

Paulus Ægineta † takes Notice of both the Methods of uſing it, and ſays, that "Sea-Water is "acrid and moderately heating and drying. That "it is prejudicial to the Stomach when drank, "raiſes Commotions in the Belly, and brings away "Phlegm. That being applied hot externally, it is "drawing and diſcutient."

When a chronic Diſeaſe is not hereditary, or contracted by any evident Cauſe, I ſuppoſe it makes its Progreſs in the following Manner. Firſt of all inſenſible Perſpiration is obſtructed from the frequent erroneous Uſe of the ſix Non-naturals, and the digeſtive Power of the Stomach begins to grow languid. Hence the Aliment is imperfectly digeſted, and a viſcid Phlegm, by little and little, adheres to the Stomach and Inteſtines; and when theſe are

* Med. Mater. Lib. 5. Cap. 23.
† Lib. 7. Cap. 3.

beſet

beſet with Phlegm or viſcid Excrements, there can be no due Secretion by the inteſtinal Glands, inſomuch that a crude Chyle is carried into the Blood, whence its Temperature being vitiated, its Circulation through the capillary Veſſels will be irregular, as well as the Secretion of the Humours through the Glands of the whole Body, eſpecially the leaſt, and of the nervous Fluid by the Brain.

When Things are in this Situation, thoſe who have ſtrong vital Stamina may, by their Means, keep off the impending Diſeaſe for ſome Time, thinking they have no need of the Phyſician's Help. However at length, though by ſlow Degrees, ſome chronical Diſeaſe appears, but of what Kind, perhaps, may be learnt from the Nature of the firſt Error, or the Patient's Diet and Way of Life, or from his having ſomething particular in his Conſtitution.

When the Rickets and King's-Evil are not hereditary, they ariſe from Errors in Diet, or from the over Care and Tenderneſs of the Parents, or from the Omiſſion of timely Remedies, when the Bodies of little Infants are ſubject to various Obſtructions, and fall into one or other of theſe Diſeaſes.

When the Habit of Body is plethoric, acute Diſeaſes are commonly generated. And yet in phlegmatic Conſtitutions, this Habit may produce Infarctions of the Bowels, and the Symptoms of certain chronic Diſeaſes may be exaſperated.

It

It is therefore no Wonder that the Medicine that carries Phlegm from the Stomach and Inteſtines downward by its internal Uſe, and reduces the Circulation of the Blood and the Secretion of the Fluids to their natural State by its external Uſe, ſhould be proper for the Cure of theſe Diſeaſes before they have taken too deep a Root, eſpecially ſince they ſtrengthen the Body at the ſame Time, when bathed in, or applied by Way of Fomentation to any particular Part.

What the Ancients ſpeak of the diſcutient Vertue of Sea-Water, may be referred to its external Uſe; and as, when drank, it almoſt comes in Contact with the inteſtinal Glands, thereby opening their Obſtructions, it may be ſaid to act as a Topic in that Reſpect.

However, we ought to be cautious in the Uſe of Sea-Water either Way; for thoſe who are of hot Conſtitutions ſhould never drink it, for it corrodes the Inteſtines of ſuch, and by a conſtant Uſe puniſhes them very ſeverely.

Not that there is any Thing deleterious in Sea-Water, but becauſe it is unfriendly to Bodies thus conſtituted. Likewiſe thoſe ſhould abſtain from it who are hectic, who are ſubject to Looſeneſſes, and who are diſordered after taking a Purge.

I have known that Sea-Water would not purge at all, and then it created a very great Uneaſineſs in

in the Stomach, which did not ceaſe till the Patient had taken a gentle Cathartic. Others, who have drank it unadviſedly, have been by its Acrimony thrown into an almoſt incurable Looſeneſs, and which has ſometimes proved fatal.

It will gently open the Bodies of the Phlegmatic, ſtrengthening the Stomach, and reſtoring its Heat, when it has been oppreſſed by a Load of Phlegm, and will revive the Appetite, provided the Doſe is not too large. Half a Pint of Sea-Water drank at Night going to Bed, and repeated in the Morning, is generally enough for Adults. But the Doſe is beſt determined by its Effects. It cauſes a very urgent Thirſt in many, though not in all. But for what Reaſon ſome Phyſicians purge their Patients who are going to be purged by drinking the Sea-Water, or why they preſcribe the drinking of it to all who uſe it as a Bath, let them anſwer; it is none of my Buſineſs.

The Phyſicians of our own Country have written very accurately of cold Bathing, without depreciating that in the Sea. But for my Part I think the latter is much preferable to the former, becauſe the ſpecific Gravity of the Sea-Water is increaſed by the Salt. Beſides the Salt, as a *Stimulus*, is an efficacious Cleanſer of the Glands of the Skin, and thoſe who come out of the Bath perceive a Kind of Firmneſs, with Heat over the whole Surface of their Bodies, which is a Forerunner of re-eſtabliſhed Health.

Health. But if this Heat does not come on ſpontaneouſly, it is to be procured by moderate Exerciſe. Beſides, it receives a remarkable Increaſe of Virtue from the purging Salt, which *Floyer* affirms to be the very Nitre wherewith the cold Baths of the Ancients, ſo much cried up, were ſaturated.

Sea-Water therefore is not ſimply a cold Bath, but a *cold medicated* Bath. But whatever Virtues this Water may have, we cannot ſo exactly calculate its Force, as to determine what Number of Immerſions are ſufficient for the Recovery of any particular Patient. Yet many are ſo ſilly as to expect this, and ſometimes Phyſicians are ſo raſh as to pretend to comply with their Requeſts.

Whatever Precautions the Authors above cited have recommended to be uſed in cold Bathing, the ſame are to be regarded in bathing in the Sea.

Oribaſius obſerves, that "whoever intends to bathe "ſhould have his Body well rubbed beforehand, "and that he ſhould plunge into the Water at "once." To this may be added, that a Patient ſubject to an *Eryſipelas*, will by bathing in Sea-Water cauſe it to return. I remember two remarkable Inſtances of this Kind. One of the Patients not believing that Sea-Water could have any ſuch Effect, would needs bathe in it again ſoon after his Recovery, which cauſed the Eryſipelas to return. This was repeated three Times with the ſame Succeſs. The other, after having been once puniſhed, deſiſted. *Proſper Alpinus* formerly obſerved from

from the Writings of the Dogmatics, *that Sea-Water was prejudicial to an Eryſipelas.* I ſuppoſe he means when uſed externally.

Sea-Water uſed hot is of very great Service to ſoften Tumours, and in other Caſes as a Topic; as has been found by Experience, ſupported by the Authority of *Hippocrates*, which ſurely will ſerve to ſtrengthen my Teſtimony.

I ſhall proceed to mention the particular Diſeaſes in which Sea-Water is beneficial, without entering into a particular Account of the Diſeaſe, any farther than the Method of Cure by this Means; for we ought to ſuppoſe that the pharmaceutic Cure is well known to Phyſicians. Perhaps ſome may think I have not given all the neceſſary Cautions and Directions that might have been expected for the Exhibition of this Remedy; but this I have done deſignedly, becauſe there are ſo many things to be left to the Judgment of the Phyſician who is conſulted, that ſcarce any Rule can be laid down, from which it will not be neceſſary ſometimes to recede. But whoever is acquainted with the true Principles of Medicine, and takes Notice of the Cautions abovementioned, will be able to apply the following Obſervations to each of his Patients in a judicious Manner.

Of

Of the SCROPHULOUS DISEASE, *or the* KING's-EVIL.

THE King's Evil proceeds from a ſizy cold Matter obſtructing the Glands, rendering them almoſt of a ſchirrous Hardneſs. Theſe are often inflamed, and turn into Ulcers that will hardly admit of a Cure. The Cauſe of this ſeems to be, if you will form a Conjecture, from the Obſtruction of the excretory Tubes of the Glands, by the Matter to be ſecreted becoming too thick. The Inflammation is excited in the Veſſels that nouriſh the Glands, which are ſo ſmall that they are unable to excite Heat ſufficient to digeſt and turn into Pus the thick Humour which obſtructs, and has greatly increaſed the Volume of the Gland, inſomuch that Nature wants the Aſſiſtance of Art to attenuate ſufficiently theſe groſs Humours.

I have ſeen many Patients relieved, and ſome cured, by the joint Operation and Uſe of Sea-Water exhibited internally and externally; which many when they have drank have thrown up again, or have been purged by it ſo as to bring away a great Quantity of Phlegm. Beſides, by the long Uſe of cold Bathing, Embrocations and hot Fomentations, the

the Humours have been attenuated, and the Swellings diſperſed; likewiſe the Ulcers have been brought to heal ſooner by theſe Means.

The Ancients have ſaid nothing of its internal Uſe in the Cure of this Diſeaſe; but the Author *de Parabilibus* has aſſerted, "that ſweating procured "by Sea-Water will diſperſe ſtrumous Swellings." And *Marcellus Empiricus* informs us "that Snails "that are found near the Salt-Works, being brui-"ſed with their Shells and laid on ſtrumous Swel-"lings, will certainly heal them," which I imagine to be owing to the Salt which they have imbibed. Among the Moderns, *Fabritius ab Aquapendente* praiſes a Remedy which he affirms has a wonderful Efficacy in curing ulcerated ſtrumous Glands. Now almoſt a fifth Part of this is common Salt. The following Caſes I take to be very remarkable.

CASE I.

A Clergyman in *Oxfordſhire* was ſtrangely afflicted with ſcrophulous Ulcers and Swellings. He had uſed all the Helps from Surgery and Phyſick a long while in vain. At length he went annually during three or four Summer Months to drink and bathe in the Sea-Water, from which he found Relief without taking any other Medicines. But as his Affairs would not permit him to ſtay long enough to perfect the Cure, the Diſeaſe gained Ground

Ground every Year, notwithſtanding he conſtantly drank the Sea-Water at Home: But when he returned to bathe in it, he always found himſelf better.

CASE II.

A Girl from *London*, about twelve Years of Age, had her Eye-lids, Noſe, and upper Lip infeſted with a Swelling and Redneſs. Beſides the Glands of her Neck, between her Ears and Clavicles, were ſwelled and hard. She had taken many Medicines according to the Advice of the *London* Phyſicians, and at length was brought down to *Southampton*. I directed her to leave off all Remedies, and to ſtick to bathing in the Sea-Water, to drinking it, and to hot Embrocations therewith. After ſome Time the Diſeaſe began to give Way, and in ſixteen Months, by perſiſting in the ſame Method, ſhe grew perfectly well and returned Home.

Of

Of the SCURVY.

IT is hard to ſay what is meant by the Scurvy among the Phyſicians of this Age, for all Diſeaſes of the Skin are diſtinguiſhed by this Name, becauſe it ſounds better in the Ears of the delicate than the Itch, the Leproſy, or the King's-Evil. But theſe Diſeaſes differ widely from the *Stomacace* or *Scelotyrbe* of the Ancients, which our elder Phyſicians affirm to be the true Scurvy. This is doubtleſs the ſame Diſeaſe to which Sailors are ſubject, as well as the Inhabitants of marſhy Places. The Moderns call it the Muriatic Scurvy, and the Chemiſts affirm it proceeds from an alkaline Acrimony, for it may be cured by Acids.

But there is another Scurvy of a milder Kind, to which our Countrymen are ſubject, which though it apes ſome of the Symptoms of the above Diſeaſe, yet it may be borne a long while without any remarkable Inconvenience, nor does it proceed with the ſame Rapidity and Cruelty as the other, unleſs it be very ſeldom. But if any ſhould affirm that it differs rather in Degree than Kind from the other, they are welcome to enjoy their own Opinion, for it is not worth diſputing about.

This

This Diſeaſe, which I call a *milder Scurvy*, generally proceeds from Errors in Diet, that is, from eating Salt and high-ſeaſoned Proviſions; as alſo from a Neglect of Exerciſe, without any Fault in the Air or Water, unleſs fermented Liquors may be reckoned as ſuch. There is a great Variety of Symptoms, of which the chief are a Laxity of the Gums, a Laſſitude of the Body and Members, eſpecially in a Morning: An itching of the Skin, when the Patient is a little hot: Puſtules, and Breakings-out in the Skin of various Kinds, wandering Pains, and other Things which Practitioners are well acquainted with.

When this Diſeaſe attacks phlegmatic Conſtitutions, it is called the *cold Scurvy*: When it invades the bilious, or thoſe of a hotter Temperament, it is diſtinguiſhed by the Name of the *hot Scurvy*. Both are relieved by an Evacuation of the Inteſtines, but Sea-Water is moſt ſuitable to the cold Sort. In the Scurvy, unleſs it is very bad indeed, recourſe is generally had to ſome Doſes of Manna and *Glauber*'s Salt with good Succeſs. I never adviſed any of theſe Patients to drink Sea-Water, becauſe I have known the Symptoms of many exaſperated thereby, eſpecially the Eruptions of the Skin; nor was this done by driving the morbific Matter to the Surface of the Body, but by increaſing the Diſeaſe by the hot Acrimony of the Sea-Water. I dare not venture to affirm that this

is

is the Case of all, for human Bodies are so differently constituted, that one Medicine cannot be depended upon to cure the same Disease in various Constitutions.

In both Kinds of this Disease the Blood is rendered less apt for Circulation and Secretion, especially by the Glands of the Skin. Hence bathing is proper for both, as I have known confirmed by a Multitude of Examples.

What Sea-Water will do in the Cure of the Scurvy in Sailors, I know nothing from Experience, and without that all Conjectures are frivolous and vain. But perhaps it may prevent this Disease in those who have regular Stools. What Good it will do in the Scurvy of inland Patients may be known from the following Cases.

CASE III.

A Man about sixty Years of Age, who lived an inactive Life, indulging himself in eating and drinking too freely, was afflicted with various Symptoms of this Disease, particularly with purple or livid Spots on his Legs. After a long Use of Antiscorbutics, he betook himself at last to the drinking of, and bathing in, Sea-Water, and by that Means got rid of his Complaints.

CASE IV.

Being called to a Man afflicted with the Scurvy, I removed all the Symptoms by the common Method, except a Condenſation of the Skin on each Leg, with a Kind of eryſipelatous Eruption covered with a white Cruſt, and from whence a ſharp Humour proceeded. I adviſed him to embrocate theſe Parts with hot Sea-Water twice a Day conſtantly, by which Method he quickly recovered his former State of Health.

Of the PALSY.

THOSE who are afflicted with the Palſy have their Stomach and Inteſtines almoſt always covered with a viſcid Phlegm, which being removed by purgative Medicines, the Patient ſometimes ſuddenly recovers. Now the drinking of Sea-Water is excellent for this Purpoſe, and I have known ſome greatly relieved thereby. When any Member is relax'd, bathing in Sea-Water is proper enough; when a Limb is contracted I never could find it did any Good; for when the extending Muſcles of a Limb are only relaxed, the contracting Muſcles of the ſame Limb wanting their Antagoniſts, remain in a conſtant State of Action, and therefore that Limb will ſeem contracted, and the contrary. If this is the Caſe, the Limb may be extended with foreign Help without Pain. But if the bending or contracting Muſcles are in Reality become ſtiff, the Limb cannot be extended without great Pain both in the Muſcles and Tendons; and this Rigidity or Stiffneſs of the Fibres muſt be removed with Emollients, before bathing in Sea-Water is attempted. When old Men are paralytic, or the Diſeaſe has continued a long while, the Patient cannot be reſtored to Health without great Difficulty.

Cœlius

Cælius Aurelianus, in the Chapter of the Palſy, adviſes Fomentations with Brine or Sea-Water; as alſo ſwimming [or bathing] in the ſame. *Celſus* directs Fomentations with hot Sea-Water, in the ſame Caſe, and, if that is wanting, with Brine.

Of the EPILEPSY.

YOUNG Perſons have been cured of this Diſeaſe by bathing in Sea-Water without drinking it. But then they have taken at the ſame Time cathartic and alterative Medicines, accommodated to the Degree of the Diſeaſe, and the Conſtitution of the Body, and this ſome Ages before *Æſculapius* had learnt to quaff the Cups of *Neptune*.

Patients are very ſeldom freed from this Diſeaſe without the Uſe of the cold Bath, except thoſe that by arriving at a riper Age are delivered from it ſpontaneouſly.

After a Fit is over, ſome Patients vomit up a ropy Phlegm, which, by creating an Uneaſineſs in the Stomach, perhaps was the immediate Cauſe of the Paroxyſm. The Fits of Children who are loaded with viſcid Phlegm, the Fore-runner of Worms, and whoſe Inteſtines are vellicated and

gnaw'd by Worms, can ſcarcely be diſtinguiſhed from epileptic Paroxyſms. Cinnabarine, volatile, and fetid Medicines are very properly preſcribed to attenuate this Phlegm, and on this Account they are good againſt the Epilepſy. *Aretæus* affirms the Contents of the Abdomen are ſometimes the Cauſe of this Diſeaſe, and when that is the Caſe he adviſes ſuch Medicines as purge Phlegm: Now Sea-Water is of this Claſs, and not of the loweſt Repute.

Bathing in Sea-Water attenuates the Blood, ſtrengthens the Solids, and by that Means renders the Circulation equal through all Parts of the Body, which is the chief Thing to be attended to for the Preſervation of Health. Perhaps *Oribaſius*, if his Tranſlator has done him Juſtice, means epileptic Patients, when he mentions thoſe who *Morbo exagitantur*, and whom he adviſes to bathe in the Sea. The Antients ſuppoſed the Cauſe of this Diſeaſe lay in the Head, and therefore *Celſus* adviſes to ſhave the Head, to anoint it with old Oil, Vinegar and Nitre, as alſo to foment it with Salt-Water. I did not think it worth while to confirm a Thing ſo well known, with an Addition of Caſes.

Of

Of the ITCH.

DIſeaſes of the Skin, ſays *Hippocrates*, ſuch as the Leproſy, Itch, Pſora, *&c.* are generated by Phlegm. This Opinion is conformable to Experience; for the Itch amongſt us, when it is an original Diſeaſe and not caught, very ſeldom appears but among poor People, whoſe naſty way of living and low Diet bring on a pituitous Habit of Body: Now as far as Evacuations, by Stool, are concerned in the Cure, it may be performed by Sea-Water; and yet this is not proper for all that are afflicted with this Diſeaſe. But Bathing is of more univerſal Uſe, for it cleanſes the Glands of the Skin by the ſtimulating Property of the Salt, and by diſperſing the obſtructing Humour, reſtores it to its Office, in which the Cure of theſe Diſeaſes principally conſiſts. Beſides, Practitioners well know that nothing contributes more to prevent Diſeaſes of the Skin than cold Bathing in general.

CASE V.

An old Woman had been afflicted with a violent Itch for four or five Years, and had taken Variety of Medicines preſcribed by Phyſicians to no manner of Purpoſe. At laſt ſhe did, and likewiſe bathed in it Sea-Water, which ſhe

for the Space of three Weeks without any Relief: On the contrary, the Itch grew worſe and worſe every Day; beſides, as the Sea-Water made her Stomach very uneaſy, I adviſed her to leave it off unleſs ſhe was coſtive. After this ſhe began to be better, and when ſhe had continued bathing for about two Months, ſhe returned Home quite free from the Diſeaſe.

Of the DRY LEPROSY.

THIS Diſeaſe may be made to diſappear by various Methods, and yet it is very apt to return again. I have known ſome relieved by the external and internal Uſe of Sea-Water for the preſent, but ſome cannot away with the drinking it. Others, who have been cured by the taking of Shop Medicines, have been kept ſound by conſtant bathing. And indeed I ſhould not venture to promiſe any Patient that this Diſeaſe would never return, if he was to abandon every Method of Cure.

CASE VI.

A young Man had been troubled with this Diſ- [illegible] ſome Years and had the Advice of the rative Medicines, and a Purge with Calomel, every Week,

Week, which freed him from the Eruptions. Then I ordered him to bathe in the Sea-Water, which he has conſtantly done for two Years, and continues pretty well, except a few Scales, which appear now and then, but without Itching, which formerly was exceeding troubleſome. Theſe diſappear in a few Days.

CASE VII.

A Man of an illuſtrious Family had his Body and all his Joints covered with white leprous Scabs. The Diſeaſe was hereditary, and he had taken Mercury, Antimony, Viper's Fleſh, and other Drugs uſually preſcribed againſt it, in vain. It would ſometimes diſappear for a while, and would then return as freſh as ever. At length his Phyſicians ſent him to drink Sea-Water, which he did ſix or ſeven Weeks before he bathed therein, without any Relief. But after he began to bathe in it, the Diſeaſe would give way, and the Scales fell off, which were ſure to return when he began to drink it again. Wherefore he left off the internal Uſe of it, of his own Accord, but continued his bathing while he ſtaid near the Sea, which rendered the Diſeaſe more mild.

Of the RHEUMATISM.

DAILY Experience has taught me how far Sea-Water will contribute to the Cure of the Rheumatiſm, eſpecially that of the ſcorbutic Kind. It was frequently uſed in Diſeaſes of the Joints by the Ancients, and *Aretæus* in forms usthat cold Bathing in Sea-Water was excellent for Diſeaſes of the Joints. And *Cœlius Aurelianus* adviſes when iſchiadic Pains are become inveterate, to fill a Bag with decrepitated Salt, and lay it to the Place, and afterwards to ſprinkle hot Salt-Water on the Parts affected. But perhaps this may more properly be referred to the genuine Gout than to the Rheumatiſm. The Precepts of *Oribaſius* are likely to be more to the Purpoſe, when he adviſes bathing in Sea-Water to thoſe who are troubled with Defluxions in the Legs or other Parts of the Body.

Of the BITE *of a* MAD DOG.

IT has been cuſtomary for thoſe who have been bit by a mad Dog, to go to be dipt in Salt-Water; and if it be done before the Patient is affected with the Dread of Water, it generally ſucceeds. After this it will do no Good, and no other Medicine can be abſolutely depended upon. However, it will be proper to uſe all Kinds of Aſſiſtance. I have in my Hand the Caſe of a Girl who had a pretty violent Hydrophobia from the Bite of a Cat, in the Year 1707. This was perfectly cured by repeated Scarifications, Bleedings, Bliſters, Purges, and Sudorifics.

Of the RICKETS.

THAT this Remedy is proper for the Rickets any one may perceive, who will take the Pains to conſult *Gliſſon* on this Diſeaſe. Cold Bathing has been long in Vogue for the Cure of this Malady, and therefore bathing in Sea-Water cannot but be very proper.

I have known a *ſimple Gonorrhæa* cured by bathing in the Sea, when it had eluded the Force of Balſamicks and Aſtringents.

It will likewiſe cure the *Whites* when they proceed from the Laxity of the Fibres.

Of

Of the OVERFLOWING *of the* MENSES.

CASE VIII.

I Knew a Woman who laboured under an immoderate Flux of the Menſes, who if ſhe happened to ſail on the Sea had it ſuddenly leſſened, and almoſt ſtopt. I adviſed her to bathe in the Sea, giving her at the ſame Time aſtringent Medicines, which ſhe had taken formerly in vain, and by this Means ſhe was cured.

I have known an *Obſtruction* of the *Menſes* removed by drinking the Sea-Water.

Of

Of DISORDERS *of the* NERVES.

BATHING in Sea-Water has afforded great Relief in Pains of the Head, Spaſms, and Convulſions proceeding from Diſorders of the Nerves, contrary to the Expectation of the Unexperienced. But I ſhall inſiſt the leſs upon theſe Things, becauſe its Power is very well known in curing all Diſeaſes of this Kind within the Reach of Medicine. Thoſe which affect the Muſcles of the whole Body, or fix their Seat in any particular Part, are of the ſame Kind. It would be needleſs to recount any Hiſtories of Caſes relating to ſo common a Remedy: However, the following is of ſo extraordinary a Kind, I could not well omit it.

CASE IX.

About twenty Years ago, two Girls were at the ſame Time afflicted with a Relaxation of the Muſcles of the Larynx, with a *Prolapſus* of the *Uvula*. They could neither of them ſpeak a Word but with the greateſt Difficulty, and every Time they drew in their Breath they made a Noiſe not unlike the crowing of a Cock. They were both reſtored to perfect Health by bathing in Sea-Water.

Of

Of the GRAVEL.

CASE X.

AN old Man had been extremely tormented with nephritic Pains for above forty Years, and had taken every Remedy then in Uſe againſt that Diſorder. At length he was ſo much relieved by the drinking of Sea-Water, that he ſpent the Remainder of his Life pretty eaſily, after the Uſe of it had brought away a great deal of Gravel, and many ſmall Stones.

A SURGEON informed me that carious Bones had been exfoliated by means of Sea-Water; but as it was uſed both externally and internally, it is uncertain to which Method this Effect may be attributed.

The Ancients have recommended the Uſe of Sea-Water in Diſtempers, in which it is now quite neglected, at leaſt of which I have not experienced its Effect in the Cure.

An ATROPHY is ſometimes a Symptom of a Conſumption, Diabetes, the Scurvy, or an Abſceſs in one of the Bowels, and whenever this is the Caſe, Regard muſt be had to the original Diſeaſe. But when this is a Diſeaſe of itſelf, it may

ariſe

ariſe from a great Weakneſs of Digeſtion, or from a too free Perſpiration through the Skin. The firſt Kind is mentioned by the Ancients under the Title of the Cachexy, which is produced by the ſaid Diſorder in Patients who receive no Benefit from their Food. In this Caſe *Cœlius Aurelianus* recommends bathing in Sea-Water, as well as *Oribaſius*; and *Dioſcorides* praiſes bathing in it when it is made hot. In the latter Caſe, when the Matter of inſenſible Perſpiration is too great, bathing in Sea-Water may ſtrengthen the Glands of the Skin, and by that Means leſſen the Quantity.

There is another Kind of *Atrophy*, to which Infants and Children are ſubject, which ariſes from an Infarction of the Mouths of the Lacteal Veſſels, by a viſcid Matter, and from an Obſtruction of the Glands of the Meſentery; whence theſe little Creatures are almoſt ſtarved to death, though they can ſwallow their Victuals very freely. This viſcid Matter which obſtructs the Lacteals may be readily carried off by drinking the Sea-Water; and the Obſtructions of the Glands of the Meſentery, if they are not become ſchirrous, may be removed by the ſame Means. Likewiſe bathing in it may anſwer the ſame End as Frictions, ſo beneficial in this Diſorder.

If a NERVOUS ATROPHY, ſo called by the Moderns, is not one of the former, particularly the cachectic Atrophy, I muſt confeſs I cannot tell what

what it is. For in all Kinds of Atrophies, when the Nouriſhment of the Solids is impeded or derived elſewhere, the Nerves may be rather ſaid to ſuffer by the common Diſorder which injures the reſt of the Body, than to be the Cauſe thereof: For an Obſtruction of the Nerves produces Symptoms quite of a different Kind.

Sea-Water is good for the Dropſy ſo far as it cleanſes the Body from Phlegm, either by Stool or Urine. But I never thought it was a Purge ſtrong enough to begin the Cure with. I have rather recommended bathing in it to perfect the Cure after the Waters have been evacuated, becauſe I judged it too weak to be truſted to alone. However, *Oribaſius* commends bathing in Sea-Water againſt this Diſeaſe: And there is a Caſe in *Baynard* of a hard Drinker, who had a prominent Dropſy-Aſctes, whom he ſent to the cold Bath. But the Patient, of his own Accord, went to the Sea-ſide, and both drank and bathed in the Sea-Water, returning in perfect Health. He likewiſe adds, that he had heard of ſeveral dropſical Patients who had been cured only by drinking the Sea-Water: But of this I have had no Experience.

Marcellus Empiricus, writing about the Gout, ſpeaks thus, "As ſoon as the Violence of the Fit "is over in both Kinds [that is the hot as well as "the cold] the Feet muſt be fomented with hot "Sea-Water. But if that is not to be had, with hot "Spring-

"Spring-Water, in which Salt is diſſolved." For when a Fit of the Gout is off, the Joints of the Feet continue exceſſive weak, and it is very probable this Kind of Fomentation will reſtore their Strength.

Cœlius Aurelianus recommends bathing in the Sea-Water againſt a ſchirrous Liver or Spleen, and, after the Tumor is ſoftened, a Cataplaſm with Salt. But I muſt own I have always been in great Doubt whether a ſchirrous Tumor can be reſolved or not.

Perhaps the Reader will think I have given a long Catalogue of Diſeaſes that are to be cured by the ſame ſimple Method, which indeed is true, if he only regards the Names, but if he conſiders the Cauſes, he will find I have not mentioned too many.

From what has been ſaid it will appear, that this Method of Cure is no Invention of the Moderns, but was known to the Fathers of Medicine while it was in its Infancy. However, I would by no Means have Patients or Phyſicians look upon it as a Panacea to be uſed unadviſedly in any Caſe, much leſs to recommend it as the *one Thing neceſſary* for thoſe Diſeaſes in which it is ſerviceable: For we ſhould enquire into the natural Diſpoſition of the Body of the Patient, as well as into the Genius of the Diſeaſe. Inſomuch that we ſhould not only conſider what will cure this Diſeaſe, but what is moſt convenient

convenient for this Patient in this Diſeaſe at this Time; for I well know that ſome of theſe Diſeaſes beforementioned, will ſometimes wantthe Aſſiſtance of other Remedies; that many of them may be cured by other Methods, and that almoſt all of them are ſometimes incurable.

However, the Uſe of Sea-Water in theſe Diſeaſes is not to be neglected; and yet to ſay the Truth, whatever peculiar Virtue the Sea-Water may have, it ſeems to me to depend entirely upon bathing, and its external Uſe. For you may remember in the firſt Caſe while it was uſed only internally, the external Uſe being omitted, the Diſeaſe grew worſe. Likewiſe the Patients in the fifth and ſeventh Caſes received no Benefit from drinking it, and bathing together; but as ſoon as the former was ſuſpended, the good Effects plainly appeared. Beſides, I never met with any Patient that was relieved by the purging Virtue of Sea-Water, that would not have received the ſame Benefit from other Catharticks, appropriated to his particular Caſe, when the ſame Aſſiſtances were uſed along with them, I mean bathing in, and the external Uſe of Sea-Water: For when the Humours are brought to ſuch a State, as to be ſafely carry'd off by Stool, it is of little Conſequence what Medicament is made Uſe of for that Purpoſe, provided a due Regard is had to the peculiar Conſtitution of the Patient, and the Nature of the Diſeaſe. But it may be done by other Means; it may be done by Sea-Water in Caſes wherein it

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is judged to be proper. But as for thoſe it does not agree with, by creating an Uneaſineſs in the Stomach, there can be no Neceſſity of troubling them with it, eſpecially in theſe Days when there is ſuch an elegant Variety of efficacious purgative Medicines, which may be exhibited in different Forms, and which may be ſuited to every Diſeaſe in which purging is required. It was for want of ſuch Advantages as theſe that the Ancients had Recourſe to the internal Uſe of Sea-Water.

But what I have ſaid of the Virtue of Sea-Water hitherto, is to be underſtood only of its purging Quality; for when cold Humours are to be deſiccated, it may ſometimes be more efficacious than other Purges. Beſides, it is the mildeſt of all hot acrid Purges. Likewiſe it may be looked upon as a warm diuretic, and from theſe two Qualities all the Effects of Sea-Water taken inwardly may be deduced. I have ſometimes tried what it would do as an Alterative given in a ſmall Doſe, but I never could perceive the leaſt Advantage from the Uſe of it.

Thus have I ſaid all that I intended concerning Sea-Water; and whoever will credit my Aſſertions, and attend to the Conſequences that may fairly be deduced from them, will never have Occaſion to repent. But if any Perſon ſhould think all that I have ſaid of no Value, he is welcome; for I ſhall not endeavour to perſuade him to the contrary.

I could have added a great Number of Caſes to confirm all that I have advanced, but I thought it needleſs to ſtuff this Treatiſe with ſuch a tedious Collection. Things that are true cannot be made more ſo by a Multitude of Examples. Beſides, I was afraid of diſguſting the Reader, if I inſiſted too long upon Inſtances of this Kind, which related chiefly to my own Practice. And ſome would be apt to ſay I was writing a Treatiſe on myſelf, rather than Sea-Water.

There may be ſome Things in which I ſeem to claſh with Dr. *Ruſſel*'s Account of Sea-Water, and ſome may think I have done it with Deſign. But this is ſo far from being true, that I had written the greateſt Part of this Commentary before I had ever heard of Dr. *Ruſſel*'s Book or Name. But I could not help taking Notice while I was reading this Book, that though the Author ſays a great deal concerning the internal Uſe of Sea-Water, yet in all his Caſes which he wrote himſelf, or received from his Friends, which he thought proper to publiſh, there are only four who experienced the internal Uſe of Sea-Water alone, except one to whom it was given by way of a Clyſter. In the reſt it is joined to the external Uſe, to which the principal Effects ſeem to me to be owing, or elſe with other Medicines, which have been noted for their Efficacy againſt particular Diſeaſes; and in moſt, both theſe Aſſiſtances were united. In the eighteenth Caſe, the Strength of the Diſeaſe

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was ſaid to be weakened by Antiſcorbutics, joined to the Uſe of Sea-Water; for many Medicines had before been taken in vain, and, among the reſt, Sea-Water. Therefore I think we ought to attribute the Alleviation to the prudent Uſe of other ſelect Medicines, which this Author employ'd, rather than to the drinking of Sea-Water.

Nor does it ſufficiently appear how much we ought to attribute to Sea-Water in the other Cures, notwithſtanding his Account of opening the Obſtructions of the Glands is ſo very well written. He likewiſe affirms, that Patients may indulge themſelves in the plentiful drinking of Sea-Water, from the Example of a Woman who drank a large Quantity, *viz.* Twenty-five Gallons, without any Harm. Perhaps forgetting we cannot infer Univerſals from particular Caſes. See Caſe 32.

I muſt needs own I have not been ſo fortunate as to make the ſame Obſervation, nor have I been ſo happy as never to have perceived any Inconvenience from the free internal Uſe of Sea-Water. I entertained the firſt Doubt from the Correctors of the Medicines which are to be met with in the Writings of the Ancients. Theſe were ſo well acquainted with their Effects on human Bodies, and have delivered their Obſervations ſo faithfully down to Poſterity, that I rather believe they attempted to correct Sea-Water from their Experience of the Inconveniences that attended the Uſe of it, than that

that they invented them purpoſely for the Sake of ſeeming to correct it. This I have often ſeen confirmed by my own Experience.

It is worthy Notice, that among other Methods of correcting Sea-Water, that of *Dioſcorides*, by keeping it ſome Time, is much celebrated. Wherefore thoſe who live at a Diſtance from the Sea, are perhaps leſs liable to its bad Effects. But indeed the beſt Corrector is the Uſe of it prudently directed.

It is my Cuſtom, if the State of the Diſeaſe will bear it, to abſtain from all other Medicines during the Uſe of Sea-Water; though I muſt acknowledge, that in ſome grievous Diſeaſes, Helps of all Kinds ſhould be called in. However, when you are trying the Effect of one Medicine, if another be joined to it you will not be able to judge to which of the two the Effect is owing.

Thus having taken Notice of the Nature and Principles of Sea-Water, perhaps it will be no hard Matter to find out ſomething that will ſupply its Place, particularly by diſſolving Bay-Salt in ſoft Water, or common Salt together with *Epſom* Salt, in due Proportions; as alſo Sal Ammoniac. I mention theſe Things for the Sake of thoſe that live at a Diſtance from the Sea-Side, and who, by their Affairs or Circumſtances, are prevented from coming to ſuch Places. But as for thoſe who are willing

willing to travel a good Way to uſe theſe Waters, or who live in maritime Places, it cannot be expected they ſhould uſe any Succedaneum.

I ſhall now bid the Reader farewel, hoping he will receive Benefit from this Treatiſe in general; or at leaſt that he will find ſome uſeful Hints whenever he thinks proper to drink the Sea-Water.

FINIS.

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